MIDWEST DEALER ISSUE
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rasshopper Control rogram Progresses n West, Southwest

Spraying Completed In Some Areas; Bids Let for New Work

DENVER—Colorado has sprayed ,000 acres in the grasshopper con- ol program out of a 212,000-acre tal in Las Animas and Baca coun- s. There is a possibility another to 12 thousand acres will be cov- ed in Douglas County also. Recent rm weather has speeded up the tch, and more equipment may be eded to finish sooner than expected. Bids were let June 22 for 300,000 res in Lea, Union, Quay and Hard- g counties in eastern New Mexico th control work to begin June 25.

One hundred twenty-five thou- nd acres have been covered in klahoma, and telegraph bids have een sent out on an additional 60,- 00 in the state's Texas County. praying will begin on the latter ortion by June 26.

On June 19 control work began 77,000 acres in Comanche and rker counties of Kansas. Because the advanced stage of the hatch is will probably be the only acre- e to come under the program this ar.

In Texas 10,000 acres of the ap- oved 41,000 thus far qualified has en completed. This work was con- ed to three counties. Another 30 40 thousand acres is under con- deration for control work, and if qualifies as to infestation and the n up by ranchers it will be rayed soon.

Work started at Buffalo in John- n County, Wyoming, on June 20 on 0,000 acres scattered over seven unties. The state was well covered 1951 and control now covers areas m ten acres to 20,000 acres in dely separated sections.

The campaign against mormon cket is about complete. Sixty-five ousand acres in Colorado, Utah, evada, Idaho and Wyoming were the program with all but 16,000 w completed. A close watch on this

Output of Organic Agricultural Chemicals Gains 16% in 1955

ORGANIC CHEMICAL PRODUCTION, SALES IN 1955

Pesticides and Other Organic Agricultural Chemicals, Cyclic

Product	Production 1,000 lb.	Sales Quantity 1,000 lb.	Sales Value 1,000 dollars	Sales Unit value per lb.
Fungicides and seed disinfectants, total	69,667	60,622	20,112	$0.33
Herbicides and plant hormones, total	75,643	38,198	24,739	.65
Insecticides and rodenticides, total	263,902	239,681	77,122	.32
Total	409,212	338,501	121,973	$0.36
Pesticides and Other Organic Agricultural Chemicals, Acyclic				
Fumigants, fungicides and seed disinfectants, total	58,948	45,719	17,119	.37
Herbicides, insecticides, rodenticides and soil conditioners, total	15,775	13,218	8,551	.65
Total	74,723	58,937	25,670	.44
Grand total	483,935	397,438	147,643	$0.37

WASHINGTON—Production of pesticides and other organic agricultural chemicals in 1955 totaled 484 million pounds, an increase of 16% over the 419 million pounds turned out during 1954, according to preliminary statistics released by the U.S. Tariff Commission.

Sales in 1955 were 397 million pounds, valued at $148 million, compared with sales of 339 million pounds, valued at $125 million, in 1954.

In 1953 production totaled 356 million pounds, with sales of 334 million pounds valued at $119 million.

Production in 1955 of cyclic pesticides and other cyclic chemicals in this group amounted to 409 million pounds, compared with 358 million pounds in 1954, an increase of 14%. Sales in 1954 were 339 million pounds, valued at $122 million, compared with 279 million pounds, valued at $102 million, in 1954. The chemical in this group which was produced in the greatest quantity in 1955 was the insecticide, DDT. In 1955 the output of this product amounted to 117 million pounds.

Production in 1955 of acyclic pesticides and other acyclic organic agricultural chemicals amounted to 75 million pounds, compared with 62 million pounds, reported for 1954. Sales in 1955 were 59 million pounds, valued at $26 million, compared with 57 million pounds, valued at $22 million, in 1954.

Industry Has Varied Opinions On Effect of Soil Bank on Plant Food Sales This Year

WASHINGTON—The prompt action of the U.S. Department of Agriculture in getting the soil bank into action this year leaves the plant food industry with mixed sales emotions.

Trade sources report to Croplife that there is a broad difference of opinion within the industry over the possible impact of the soil bank on sales—particularly among nitrogen producers with markets in corn areas.

These trade sources tell Croplife that some nitrogen producers are pessimistic about effect of the new plan on sales this crop year in the corn belt. Others have taken hope that the favorable terms of the commercial corn belt loan program for compliers and non-compliers with acreage allotments will prompt farmers to see the advantage of pushing corn production to the maximum through the late season use of nitrogen.

Previously Croplife has sensed that the soil bank, to the extent it might be made effective this year, posed an opportunity for dealers and distributors of nitrogen fertilizer materials.

The soil bank proposition is a many-sided influence which will be subject to deeper analysis starting next week in Croplife after further conversations with USDA experts.

Trade sources in the tobacco industry tell Croplife that the shade-grown varieties of tobacco in Connecticut and Massachusetts will probably suffer larger reductions in acreage this crop year. For some varieties of this cigar leaf tobacco the USDA payments will run as high as more than $300 per acre, they say.

For the most part it is not suspected that the soil bank—at least the acreage reserve aspect—will be too highly successful this year. The only favorable aspect for the plant food industry appears to be in the commercial corn belt.

Production reduction of most crops will not be material and the reduction of surpluses must not be seen as substantial notwithstanding the prompt USDA action in getting its soil bank program on the road.

USDA is about to publish its crop reduction goals for the acreage reserve program of the soil bank for this year. This sets up

(Continued on page 20)

★ ★

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Guide to Soil Bank Essentials Released by USDA

WASHINGTON—The U.S. Depart- nt of Agriculture has made avail- e to Croplife its work sheet guide the soil bank program for the 56 crop operation. It is set forth final official form showing com- ctly all the essentials of the bank eration. (See Page 20) Retention this reproduction of the official DA work table may be convenient readers.

USDA officials do not contem- te any broad production cuts in 1956 crops from soil bank con- butions. There may be some ger-than-expected certificate pay- nts to farmers of blown-out wheat d or drouth area wheat, but these production factors have already been accounted for and probably will not reduce the 1956 crop of wheat.

It is of the utmost importance that producers of the soil bank crops—wheat, corn, cotton, peanuts, rice and tobacco—do nothing for soil bank participation until they have signed up soil bank contracts for the acreage reserve program at county committee offices.

In its worksheet, USDA has established categories of eligibility for soil bank payments.

Eligibility through underplanting may be attained for corn, rice, spring wheat, cotton, peanut and tobacco through certification that underplanting of the corn base acre level of the soil bank or the old corn acreage allotment of the farm law was in anticipation of compliance with the soil bank or due to weather conditions.

In connection with winter wheat, certification will be required that underplanting was due to weather conditions to make the winter wheat acreage eligible for the soil bank for the 1956 crop.

This ruling obviously makes eligible all drouth area and blown-out wheat land for soil bank payments this year, except that such acreage eligibility for winter wheat will be compensated at a reduced level of soil bank certificate value.

In instances of an individual farm where a full crop of the soil bank crops has been planted it must be shown by the individual producer that he has (1) complied with the acreage allotment or corn acreage base but that the acreage was not harvested due to destruction by natural causes or (2) where the final date—the last date established for adjusting crop acreages for the acreage reserve program of the soil bank—is after May 28 and prior to June 30 or the established final date, whichever is later, but in no event later than July 31, 1956.

(Continued on page 20)

Dow Chemical, Bay Refining Corp. Study Acquisition

MIDLAND, MICH.—Officials of the Dow Chemical Co. and Bay Refining Corp. are considering acquisition of Bay Refining by Dow.

Dow's Midland Division is taking an option to buy Bay Refining and its associate, the Bay Pipe Line Corp., both headquartered at Saginaw, Mich. and with operations in Bay City, Mich.

No change in the present operations of the Bay companies is being considered, according to W. Rolland Stewart, vice president and general manager of Bay Refining. "We plan to continue our present activities in the refining and distribution of gasoline and burning oils indefinitely," he said.

Dow's plans are to build a plant for petrochemicals production on property it owns adjacent to the Bay Refinery and to coordinate production at this plant with its production facilities in Midland, according to W. H. Schuette, Midland Division general manager.

COORDINATOR NAMED

COLLEGE STATION, TEXAS — A new post of coordinator for the research programs of the Texas agricultural experiment stations of West Texas has been given to Dr. Gerald W. Thomas of College Station, according to an announcement by Dr. R. D. Lewis, station director. Some of the new duties will be in working with farmers and ranchers to determine the future problems and needs for the area.

IOWA FIELD DAY

AMES, IOWA—New developments in crop production and soil management will be featured at the annual Iowa State College agronomy field day to be held here June 29.

California Considers Quarantine Against Plant Host Shipments

SACRAMENTO — The California Department of Agriculture is considering a quarantine against the shipment into California of plant hosts to three types of insect borers.

The proposal was outlined at a hearing before Charles V. Dick, chief of the Division of Plant Industry. Arizona and Texas interests offered protests.

C. E. Browning, supervisor of plant quarantine work for the department, said the southern cornstalk, southwestern corn and sugar cane borers are rated as three of the worst insect enemies of corn, sorghums and sugar cane. He said the proposed quarantine would restrict shipments from 18 states of all corn, sorghum and sugar cane plants and parts of plants which would introduce the pests to California. The quarantine also would require fumigation of ear corn and hay.

Chemical Engineering Service Combines With Manitowoc Shipbuilding

GREEN BAY, WIS.—R. W. P lips, owner of the Green Bay e neering and construction firm, Ch ical Engineering Service and Mod Plant Equipment Co., has combi his designs and facilities for ma facturing fertilizer plant equipm with those of Manitowoc Shipbu ing, Inc.

The new firm is known as Chem Engineering Service Division of Ma towoc Shipbuilding, Inc., and it have offices at Manitowoc, Wis. will manufacture dryers, coole granulators and complete shipp and mixing units, as well as hop systems and other fertilizer pl equipment.

The Green Bay firm has been act in fertilizer plant building and m chinery construction for a number years, and it has built many new f tilizer and superphosphate plants the Midwest. During the past f years, Mr. Phillips and Chemical gineering Service have limited th operations largely to the study a construction of experimental granu tion units.

Manitowoc Shipbuilding, Inc. w established in 1902. Since that ti it has engaged in not only the c struction of ships but also of hea industrial equipment including drye coolers, tanks, cement and paper m equipment, cranes and dry cleani plant machinery. The firm has acres of manufacturing facilities, cluding large welding, machine a fabricating shops.

The combination of the two fir will provide ample fabrication fac ties as well as an extensive resear and engineering staff, Mr. Phill said.

J. C. Hackleman Honored by Crop Group

URBANA, ILL.—J. C. Hacklem professor of crops extension of department of agronomy, Univers of Illinois, and Mrs. Hackleman w honored June 19 at a banquet in Illini Union on the university camp by members of the Illinois Crop I provement Assn. and friends fr throughout the country. Prof. Hack man retires from the University as Sept. 1, 1956, after being a member its staff since 1919—38 years of se ice in the field of crops extension. has been closely connected with association since it was organized 1922.

Prof. Hackleman has long been terested in the affairs of the Am can Society of Agronomy. He read papers at the annual meeti and was chairman of the crops s tion in 1947. He was a member of first advisory committee for magazine What's New in Crops Soils. Prof. Hackleman was electe fellow of the society in 1950, and served that organization as secret and president.

Thrip, Fleahopper Control Pays Off in Texas

COLLEGE STATION, TEXAS Thrip and fleahopper control Texas' High Plains areas gave s cotton producers from 310 to more pounds per acre during 19 according to W. L. Owen Jr., as ciate entomologist, Texas A&M.

Control was gained effectively w two or three applications of To phene, dieldrin and heptachlor, w applications were made soon a cotton reached the fruiting stag

Control of thrips and fleahopp resulted in economical increa Two applications of the mater yielded gains of 310 to 370 lb. seed cotton per acre. Three tr ments gave yields of 321 to 391 in some tests, up to 602 in anot In dollars and cents that means f $36.62 to $71.32 per acre.

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INSECT AND PLANT DISEASE NOTES

Grasshopper Populations Reported High in Kansas

MANHATTAN, KANSAS—The grasshopper hatch is now nearly fully complete over the entire state of Kansas. (June 15) Heavy nymphal populations have been reported from many areas of the state and adult populations are fast appearing. Numerous adult lesser migratory and red-legged grasshoppers are now found as far north as Clay, Riley, and Pottawatomie counties and adult two-striped grasshoppers are now present in south central and southeastern counties.

The adult 'hoppers are beginning to move from hatching beds out into fields of row crops and into home gardens. Immediate application of control measures would give protection to fields that may later be seriously damaged if 'hopper populations are permitted to further develop. Counts in counties of central and south central Kansas range from 15 to 80 'hoppers per square yard. In some areas these counts include as many as 20 adults per square yard. Adult populations, of course, are higher in the southernmost counties.

Chinch bug populations continue to increase in many fields in central and south central counties. The mass migration of nymphs and adults from the small grain fields to milo and corn fields has already begun. In some fields barrier controls appear to be too late at this time; however each field is a problem in itself and control measures should be applied as required.

Heavy and destructive populations were found in localized areas of Riley, Geary, Marion, Clay, Butler, Cowley, Sumner, Chase, and Morris counties. Infestations requiring controls were also found in parts of Douglas, Franklin, Osage, Shawnee, Pottawatomie, and Wabaunsee counties. Counts of chinch bugs range from 30 to 50 per linear foot of drill row (small grains) to highs of over 400 per foot. Counts on corn and sorghum or milo plants range from 10 to several hundred per plant in some fields. Some of the heavier infested milo fields have had from 4 to 15 rows of seedlings destroyed by the heavy migrating nymphal chinch bug populations.

Populations of spotted alfalfa aphids remain light over central and southern Kansas. No problem areas are known to occur in the state at this time. Counts range from 3 to highs of 60 per sweep in the infested fields and highs of 120 to 140 were reported from one field in Geary County.

A survey of corn fields in south central Kansas showed that about 20 to 40% of the plants showed whorl feeding as the result of corn earworm larval feeding activity. Larvae observed were nearly all in early instars. Corn earworm moths and eggs were found in all corn fields that were examined.

Early instar larvae, probably southwestern corn borer were found feeding in the whorl of corn plants in a few fields in Butler and Cowley counties. The infestation averaged about 8% of the plants. These larvae were found in fields that were also infested with corn earworm.

A localized infestation of true armyworm was reported from Atchison County, northeast, in a field of wheat. The larvae had stripped the leaves and beards from the wheat plants and then moved on into an adjacent corn field before being discovered.

Corn leaf aphids have begun to appear in milo and corn fields in both south central and central Kansas areas. Infestations have been observed and/or reported from both Marion and Cowley counties. Populations, although light to moderate at present, will probably begin to build up in intensity.—Dave Matthew.

Insects Damage Cotton in South Carolina Fields

CLEMSON, S. C.—Thrips, aphids and flea beetles continue to damage cotton throughout the Piedmont counties. Aphids on cotton are also reported in Allendale, Dorchester, Florence and Marlboro counties. Allendale, Barnwell and Lexington counties report the presence of bollworms feeding on leaves and squares. Four counties in the lower Piedmont have noted spider mites on cotton.

Boll weevils are "pouring out" of hibernation quarters in areas where general rains have occurred. All counties reporting this week along N.C. line state heavy weevil emergence. Dry weather conditions in some areas are still delaying weevil emergence.

The weekly report from entomologists at the Pee Dee Experiment Station states seven live boll weevils were removed from the 10 hibernation cages as compared to six the previous week. The Pee Dee report also states eighty-three weevils were found in the ⅓-acre trap plot during the week as compared to thirty-nine the previous week. This survey states that showers during the week resulted in a considerable increase in the number of weevils appearing in fields in that area.

Damping-off disease of cotton seedlings is still occurring in Marion, Cherokee and York counties. Scald, although not a disease, is reported in several counties where heavy rains with accompanying winds occurred followed by bright sun or high temperatures and humid conditions. In some cases cotton plants were completely defoliated.

Lygus Bugs and Thrips Active in Western Area

PHOENIX, ARIZ.—Thrips continue to be a problem of cotton in many parts of the state especially in the higher elevation areas of Greenlee, Graham, Cochise and Pima counties. Thrips are also injuring large plants in fields where grain is being harvested.

In Pinal county Lygus counts are on the increase. Some fields in the Maricopa area showed some counts increasing to the danger mark.

In Maricopa county, County Agent Carter and the writer find that thrips are causing injury to some fields in the Queen Creek, Chandler and Kyrene areas. Some growers are also finding 10 to 12 thrips per 100 growing tips that are destroying newly formed squares. In the Avondale, Litchfield and Peoria areas, Lygus populations seem to be on the increase in both stub and planted cotton. Damage to flowers and squares is showing up in many fields, and some 10 to 12 Lygus are appearing in 100 sweeps of the bug net.

Red spider mites are also showing up in fields in Maricopa and Pinal counties and in the same areas the black flea hopper is showing up in injurious numbers and controls are being advised.

The cotton leaf roller is also showing up in the western part of Maricopa County and some fields are being dusted, although most infestations are on the marginal line.—J. N. Roney.

Alfalfa Weevil Still Troublesome in Virginia

BLACKSBURG, VA.—Alfalfa weevil larvae and adults are still damaging various crops throughout the state. In his weekly report on insect activity in Virginia, Arthur P. Morris, associate entomologist at Virginia Polytechnic Institute, says the alfalfa weevil is causing heavy damage to ladino clover, as well as alfalfa, in different areas; and also is reported as feeding on red clover in one area. Even butter beans are victims of the weevil in at least two counties.

Mr. Morris also reports that armyworms have been doing some damage to oats, barley, rye, and wheat on the Eastern Shore, but no heavy outbreaks have been spotted anywhere as yet.

Flea beetles and cutworms are damaging some stands of corn, and they may become more generally distributed.

Ornamental plants are being injured by woolly maple aphids, pine bark aphids, scale insects, and to a lesser extent, thrips.

Corn Borer Reported Damaging Maryland Crop

COLLEGE PARK, MD.—Very striking differences are seen in alfalfa from sprayed and unsprayed fields. The main loss was from alfalfa weevil; meadow spittlebug damage is conspicuous in some spots. Keep a watch for potato leafhopper buildup.

European corn borer eggs h... been reported as numerous in F... erick county on corn 8 to 15 inc... tall. In southern Delaware, severe... jury to corn has been reported.

Codling moth larvae began ha... ing and entering apples at Hanc... June 9. Leaf miners of the sec... brood are laying eggs on apples. Sc... damage to cherry leaves at Coll... Park from black cherry aphid ... been observed (control comes in ... dormant season).

Mexican bean beetles are qui... heavy in central Maryland. Oni... are infested with thrips. Hornwo... eggs have been found on tomato... Washington County, flea beetles ... Colorado potato beetles were act... on the same plants.—Theo. L. Bis... and Wallace C. Harding, Jr.

PLANT FOOD INSTITUTE TOP OFFICIALS—Four of the key officers elected at the first annual convention of the National Plant Food Institute, June 10-13, at the Greenbrier, White Sulphur Springs, W.Va., are shown above. Left to right, they are: Edwin Pate, chairman of the board; Dr. Russell Coleman and Paul T. Truitt, executive vice presidents; and C. T. Prindeville, president. Mr. Pate is president of the Dixie Guano Company, Inc., of Laurinburg, N.C. and Mr. Prindeville is vice president of Swift & Company, Chicago, Illinois. Other officers elected at the meeting were: W. R. Alistetter, vice president; Louis H. Wilson, secretary; and William S. Ritnour, treasurer. (Croplife, June 18, page 1.)

Weather Favorable to Co... Borer Ups Populations

URBANA, ILL.—Hot weather t... past week (June 15) greatly accel... ated borer development. In cent... and north-central Illinois at lea... 75% of the moths have already em... ged, while in northern Illinois o... 50% have emerged. Corn growth ... ahead of last year, however, maki... conditions favorable for borer su... vival.

Recent high temperatures we... beneficial in the corn borer cont... program, as they killed over half ... the pupae from which moths had n... yet emerged. Further mortality m... still occur. This will noticeably redu... the number of moths emerging to l... eggs during the next two weeks. T... last 25 to 50% of the eggs that a... laid produce most of the borers. Ve... few borers hatching from the first ... to 75% survive, as even the most a... vanced corn at that time is not f... vorable for survival. With the treme... dous overwintering populations th... were present in some areas, howeve... we cannot afford to be unduly op... mistic and must continue to be ... guard for the next two to thr... weeks. Many moths now present ... the fields may live and continue to l... eggs for two or more weeks.

Borer development in southern ... and south-central Illinois is con... siderably ahead of corn growth and ... except in isolated instances, insecti... cide applications should not be nec... essary. Treatment on the earlies... corn, where necessary, should b... made before June 30.

In the eastern part of central Il... nois, egg counts on the most matu... corn varied from 1 to 4 per plant th... week, and hatch has already starte...

In north-central Illinois, egg coun... are also high in the eastern half ... this area, averaging one to two p... stalk on the earliest corn.

In northern Illinois, egg-laying ... just well started, but estimates ... need for treatment cannot yet ... made. Insecticide applications shou... probably start about July 1.—H. ... Petty.

Big Population of Weevils Found in Tennessee

KNOXVILLE, TENN.—Overwi... tering boll weevils were found in ... of the southern tier of counties th... week (June 18) feeding on the te... minal growth. The highest number ... weevils found per 100 feet of row w... seven. The average number of we... vils per 100 feet of row was 2 for t... infested fields.

Thrips continue to cause damage ... some fields but numbers seem to ... decreasing in the older cotton. Co... trol is still being carried out in t... heavy infested fields all over the are... Damage is expected to continue ... young cotton where no control mea... ures have been taken.

Flea beetle populations have in... creased slightly over last week and ... continue to cause damage all over ... the area in combination with thrips.

No damaging infestations of aphi... have been found this week, but th...

still present in most fields in
ll numbers.
ea hoppers are beginning to show
n more fields this week although
are in small numbers, and spider
s are still being found present in
y fields in very small numbers.—
. Mullett.

lorado Growers Worried out Psyllid Infestation

OLORADO SPRINGS, COLO.—
ato and tomato growers in north-
Colorado are concerned over the
reasing numbers of psyllids which
e reached the critical infestation
ge. Dr. L. B. Daniels, chief ento-
ogist for Colorado A&M Experi-
nt Station has confirmed the seri-
ness of the situation and states
t spraying of tomatoes and po-
es will assume unusual impor-
ce this year.

Western wheat mites have been re-
ted present in damaging numbers
the counties of Adams, Weld,
an and Yuma. Favorable weather
ditions have also increased the
ulations of a number of species of
ids on ornamentals, fruits and al-
a in Larimer, Weld, Boulder,
ams, Arapahoe and Jefferson coun-

nt Disease Threatens lifornia Tomatoes

AN DIEGO, CAL.—The tomato
p in some Southern California
nties was suffering from curly-top
us disease the week of June 15,
ording to Dean Palmer, agricul-
al commissioner, who estimated
t the virus had caused 57% dam-
to 7,500 acres of tomatoes in Im-
ial County alone. The value of the
al crop is set at $15,000,000.

Grasshoppers are reported to be in-
ting inland meadow areas. The
ts were said to be swarming over
fields in the Santa Ysabel, Witch
eek and Warner Springs areas.

merous Species of Crop sts in New Mexico

STATE COLLEGE, N.M.—Spotted
alfa aphid populations are heavy in
ne untreated fields in Dona Ana,
dy, Chaves, De Baca, Quay, So-
rro and Lea counties. Very few
ds have not been sprayed or dust-
Control is effective when insecti-
es are applied properly. Popula-
ns are light in San Juan County.
Pea aphids (Macrosiphum pisi) are
esent in most alfalfa fields in San
an county, but infestations are not
maging.

**Lygus bugs number over 50 per
0 sweeps in one alfalfa field in
ona Ana county. Lygus bugs were
lso reported in one cotton field in
ona Ana County.**

Thrips infestations are generally
ht in cotton in Dona Ana, De Baca,
corro, Quay and Chaves counties.
ne heavy infestation was found in
aves County.

Aphids are general, but light and
otty in most cotton fields in Eddy,
aves and Quay counties with one
avy infestation in De Baca County
d one medium infestation in Chaves
unty.

Bollworms (1st and 2nd instars)
d eggs are being found in very
all numbers in some cotton fields
Dona Ana, Eddy, Chaves, and So-
rro counties. Some leaves were
eletonized.

**Grasshoppers are invading lawns
nd home gardens in Taos and
edium infestations are reported in
astures in Taos County. A medium
nfestation of grasshoppers is re-
orted on range land in the eastern
of Harding County. A heavy in-
estation was found south of Ros-
ell in Chaves County.**

Grasshopper Control Project nym-
al surveys report infestations of 5
50 nymphs (1st to 5th instars) per
uare yard in Lea County. Heavy
gulations of 4th instar nymphs are
reported in low areas and eggs are hatching on open range in Chaves and Lincoln counties. Infestations of 25 to 75 1st to 4th instar nymphs per square yard are reported in large areas of range land in Quay, Harding, Union and Colfax counties. A small infestation is reported in Roosevelt County.—John J. Durkin.

Missouri Advises Killing Grasshoppers Right Now

COLUMBIA, MO.—We are finding a lot of grasshoppers in most sections of the state. Most are still relatively small, but in the drier portions of the state, damage is beginning to hurt. We can't stress too strongly the necessity of killing now as many of these small hoppers as possible. These are the same ones that will be eating everything but the fence posts within another month.

An infestation of chinchbugs moving from small grain into corn is now going on, and when large numbers of bugs are present, it will only take a few days for them to take out a stand of corn.

European cornborer egg laying is fast reaching a peak over the state. Check fields of early corn for infestations since the moths rarely lay eggs in corn of less than 34 to 35 inches in extended height. Large numbers of eggs on the plants now are an indication of possible trouble later.—Stirling Kyd and Geo. W. Thomas.

Grasshoppers Assume Importance in Iowa

AMES, IOWA—Grasshoppers continue to be of critical interest. Populations range from 10 per square yard in north Iowa to 100 or more per square yard in south ⅔ of Iowa. Second crop alfalfa is being eaten off as fast as it grows in some areas, garden crops have been destroyed and a serious threat to corn and soybeans is posed by the probable movement of hoppers out of mature bluegrass, brome grass and oats. (June 16)

Hatch is not complete. Continuous hatching may give the impression of failure of insecticides. (Aldrin, lindane and heptachlor evaporate rapidly in hot weather, so frequent applications of these may be needed in fencerows and other vacant areas.)

Corn borers are all pupated in Iowa:

	South	Central	North
Pupation, %	100	100	100
Emergence, %	...	50-75	70
Egg masses/100 plants	70	70	10-70
Leaf feeding, %	5-10	5	2- 4
Corn height, in.	6-50	6-50	12-30

Warm weather should give us a short egg-laying period. 75% of tall corn plants may have leaf feeding in all parts of the state by the week of June 18-23. Watch fields closely and

(Continued on page 8)

MORE growers than ever before SELECT:

—for major crop pest control

THE REASONS:

- **Control for over 100 major crop pests**
- **Thoroughly tested and accepted on millions of acres of crops**
- **Heavy advertising and merchandising aids**
- **Technical assistance in solving special problems**

EVERY YEAR the use of aldrin, dieldrin, and endrin grows by leaps and bounds. Growers are acting on the experience of other growers; using more and more aldrin, dieldrin, and endrin for the control of pests on cotton, corn, tobacco, vegetables, small grain and other crops.

Aldrin, recognized for its fast action and powerful high kill on foliage pests, is famous, too, as a soil insecticide. Dieldrin is recognized for uses where long residual action is important . . . dry, windy areas; where timing of an application is critical; as a household and lawn insecticide. Endrin has established itself as one of the best insecticides for the control of hornworm and budworm on tobacco. On cotton, it promises to be the top cotton pest control. It gets *both* boll weevil and bollworm, as well as other major pests.

All three—aldrin, dieldrin, and endrin—have label acceptance by federal and state departments of agriculture.

Shell field representatives work constantly with growers, county agents, extension entomologists, state and federal workers to determine growers' needs. Information of this type is passed along to formulators. In addition to this valuable service, powerful, timely advertising *in your area* backs up Shell insecticides; helps build your sales.

SHELL CHEMICAL CORPORATION
AGRICULTURAL CHEMICAL SALES DIVISION
460 Park Avenue, New York 22, New York

SHELL

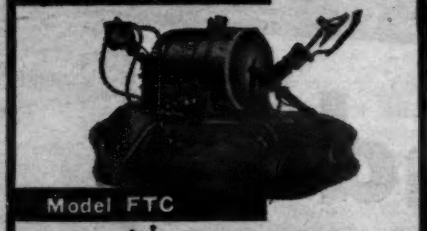
Medfly Quarantine Area Enlarged in Texas

AUSTIN, TEXAS—The number of Texas counties receiving quarantine inspection from the Mediterranean fruit fly has been increased by 17, according to an announcement by John White, Texas agriculture commissioner.

The quarantine prohibits the movement of citrus fruit from Florida, Alabama, Mississippi and Louisiana into the quarantined section of Texas. The quarantine originally had included only six counties in the lower Rio Grande Valley.

the Broyhill

CUSTOM QUALITY
Agricultural Chemical
Application Equipment



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Trailer - Truck - Tractor
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DAKOTA CITY, NEBRASKA

Catalog Available

Edwin J. Pinigis

Edwin J. Pinigis Joins Pennsalt

TACOMA—Appointment of Edwin J. Pinigis as technical supervisor for southern division has been announced by A. F. Bixby, agricultural chemicals manager, for Pennsylvania Salt Manufacturing Company of Washington.

Mr. Pinigis, a 1950 chemistry graduate of the University of Pittsburgh, formerly served with Pittsburgh Coke & Chemical Co. and American Potash & Chemical Co. working on agricultural chemical formulations and various other related technical phases.

Mr. Pinigis will establish his office at Bryan, Texas which is Pennsalt's Agricultural Chemicals, Southern Division headquarters.

Need for Lime

ST. PAUL — Six million acres of Minnesota cropland need liming right away, according to surveys by the University of Minnesota's soils department. John Grava, who heads the University's soils testing laboratory, says that to build up the lime reserves in these soils about four million tons of lime should be going on each year. Yet, the fact is that only 400,000 tons of lime were put on in 1955. That's only one-eighth of the total need.

Merion Bluegrass Assn. Reelects Arden Jacklin

PORTLAND, ORE.—Arden Jacklin was reelected president of the Merion Bluegrass Assn. at the group's annual meeting during the Pacific Seedmen's Assn. convention held here.

Institute Releases 13th Recorded Farm Radio News Series

WASHINGTON—Four nationally-known authorities on subjects important to the fertilizer industry are being heard on the National Plant Food Institute's thirteenth recorded farm radio news service series over more than 1,050 stations during June and early July.

Each of the recorded series has set a new record for acceptability—from 304 stations when the service first was started to more than 1,050 using the present series.

Speakers and their subjects for the thirteenth series are as follows:

Dr. E. C. Elting, deputy administrator for experiment stations, Agricultural Research Service, U.S. Department of Agriculture, on "Research Cuts Farm Costs."—A noted agricultural scientist points out that progress in research "has meant greater abundance and larger incomes for all of us."

E. T. Savidge, deputy manager, American Bankers Assn., on "Financing Soil Fertility." — A prominent bankers' executive emphasizes that "it is essential that we build our soil reserves . . . just as it is important for banks or other businesses to provide financial reserves against future needs and emergencies."

Oris V. Wells, administrator, Agricultural Marketing Service, USDA, on "Building Markets for Farm Products." — A nationally-known marketing specialist reviews "three basic essentials to a solid, continuing market expansion for agriculture."

Dr. C. H. Wadleigh, chief, Soil and Water Conservation Research Branch, Agricultural Research Service, USDA, on "Banking on The Soil."—A leader in agricultural research points out that "when farm prices are low in relation to costs of production, good soil management becomes even more necessary than in easier times."

500 Expected at Meeting of Pacific Branch Entomologists

BERKELEY, CAL.—Five hundred entomologists from the 11 western states, Canada and Hawaii will meet at the Claremont Hotel here June 26-28 to hear about the latest scientific weapons for use against insects.

Delegates to the annual Pacific branch meeting of the Entomological Society of America will be welcomed at 9 a.m. June 26, by Claude B. Hutchison, mayor of Berkeley and dean emeritus of the College of Agriculture, University of California.

Among program highlights will be: the adventures of an insect hunter in the headwaters of the Amazon; a photo salon exclusively for insects; a new termite fumigant; new forest insects and other pests recently found in California; radioactive insects that provide "hot" meals for trout, and a new way to get rid of cattle grubs by dosing feed with chemicals.

The public will be admitted to all sessions, said program arranger Woodrow W. Middlekauff, associate professor of entomology and parasitology. Walter Carter, chairman of the Pacific Branch of the association, will preside at the meetings.

Pesticide Regulation Act Dies in Pennsylvania

HARRISBURG, PA.—Pennsylvania House Bill No. 2041, relating to the regulation of the sale of pesticides, died in a legislative committee and was not enacted by the recent session of the Pennsylvania Legislature.

The state is continuing to operate under its insecticide and fungicide law which was passed in 1917 and amended in 1925, 1931, 1939 and 1941. Under this act rodenticides and weed killers need not be registered.

Hans M. F. Fischer

Hans M. F. Fischer Named to CSC Petrochemicals Post

NEW YORK—Commercial Solvents Corp. has announced the appointment of Hans M. F. Fischer as assistant to W. Ward Jackson, vice president in charge of the company's petrochemicals division.

Mr. Fischer was formerly assistant to the general manager of the company's petrochemicals production department. In his new capacity he succeeds Thomas Potter who has become associated with Northwest Nitro-Chemicals, Ltd., a CSC affiliated company at Medicine Hat, Alberta, Canada.

Mr. Fischer joined Commercial Solvents in 1933 as a member of its Terre Haute, Indiana production staff. His work with CSC has included research engineering, management of the Terre Haute, Ind., plant and, in his most recent position, responsibilities for diversified petrochemicals production.

In his new capacity, Mr. Fischer will be concerned with all phases of the company's petrochemicals operations. He will make his headquarters at CSC's general offices, 260 Madison Ave., New York City.

Agricultural Terramycin Controls Crown Gall Of Cherry Trees

SEATTLE—An agricultural formulation of the antibiotic Terramycin will effectively control crown gall of cherry trees, it was reported here recently.

Ira W. Deep made the statement before the 38th annual meeting of the American Phytopathological Society's Pacific Division in discussing research work he completed for his doctoral dissertation at Oregon State College.

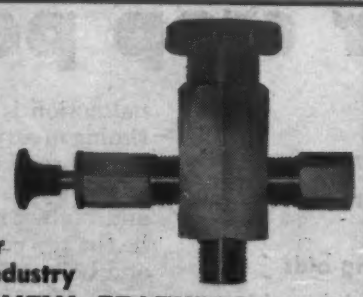
Dr. Deep said that agricultural Terramycin routed the bacterial disease in 55% of the cherry trees used in the Oregon State experiments and that it was actually absorbed by the trees.

In these tests, one-year-old Mazzard cherry trees were root-pruned and the seedlings dipped in a suspension of crown gall bacterium. The trees were then treated with agricultural Terramycin at various concentrations.

Dr. Deep reported that the most effective treatments resulted from dipping the seedlings in a Terramycin solution of 400 parts per million for 15 minutes, or a solution of 200 ppm for one hour. Incidence of gall following these treatments was reported to be 49 and 41% respectively as compared with 99% in infected but untreated trees.

The significant reduction in incidence of the disease was interpreted by Dr. Deep as showing that Terramycin was actually absorbed by the plant tissues.

A NEW
APPLICATOR TANK
CONTROL VALVE



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WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

ussian Aid

The Communists are providing oney and technical aid for a number underdeveloped countries in an atmpt to offset the work done by merican agencies. Comments have en made that Russian promises are rthless, that the spoken intention ll not result in action.

From Yugoslavia comes a report of ans to erect three factories for the oduction of fertilizers. One, a nigenous fertilizer plant, will have a arly capacity of 100,000 tons. The cond plant will be for superphosate, capacity 250,000 tons, and the ird for the production of 20,000 ns of sulfuric acid a year.

The use of fertilizers in Yugoslavia growing rapidly; if the plans reorted are implemented it is possible at other countries, particularly ose in the east which have a dire ed for fertilizers to replenish their erworked land, will look to the ommunists to provide similar facilies.

ther New Plants

The trend for more and more proction facilities in the fertilizer orld is a continuing one. Considerain is being given in El Salvador to e construction of an ammonia and rea plant. The oil-oxidation process ill be used to produce 35,000 tons ammonia, most of which will be ed for conversion to 57,500 tons of rea. The cost of the new facility is t at $13 million.

Representatives of several U.S. firms are reported to have been consulted on the project but nothing has been finalized yet.

French capital is to join with Mexan money in building an anhydrous mmonia plant at Monclova, in the orthern state of Coahuila. Productn aim is 100 tons a day and coking lant gases will be used. The cost is stimated at $10 million.

The National Bank of Foreign rade, a government agency, expects hat farmers in northeastern Mexico vill be able to cut their imported fertilizer requirements by 35%.

Locust Program Success

A report from Rome states that his year's program to cut back the damage done by the desert locust in he Arabian peninsula has been successful. The Food and Agriculture Organization of the United Nations contributes $300,000 to the cost of the program while 16 governments and the Arab League jointly subscribe another million. The British government s the biggest single contributor.

Dr. F. T. Wahlen, director of the agriculture division of FAO, says the final results of the current campaign are expected to be as beneficial as the programs of the past three years.

Overseas Procurement

The International Cooperation Administration announces that Indonesia is in the market for pesticides to the value of $12,000. Only U.S. firms are allowed to take the business and the procurement will be done through the Emergency Procurement Service. Terminal delivery date has been set for March 1, 1957.

India is another beneficiary under aid programs, and a need for nitrogenous fertilizer has been announced by ICA. One purchase, valued at $2.3 million, will come from Italy, another, valued at $1,641,000, will be supplied by German firms. In the case of the Italian deal, the terminal delivery date is Nov. 30, 1956, and in the case of Germany, Oct. 31, 1956.

Pesticide Trade Booms

The Danish pesticide industry is booming, for the winter survival of pests has been heavy. Output in the early months of this year topped that in the corresponding months of last year by 7%. The production of calcium arsenate was 10 times as great as before; BHC was two and one half times higher, and DDT was up 20%.

In addition to a good domestic trade, the Danish manufacturers are expecting an improved export business.

Canadian Infestation

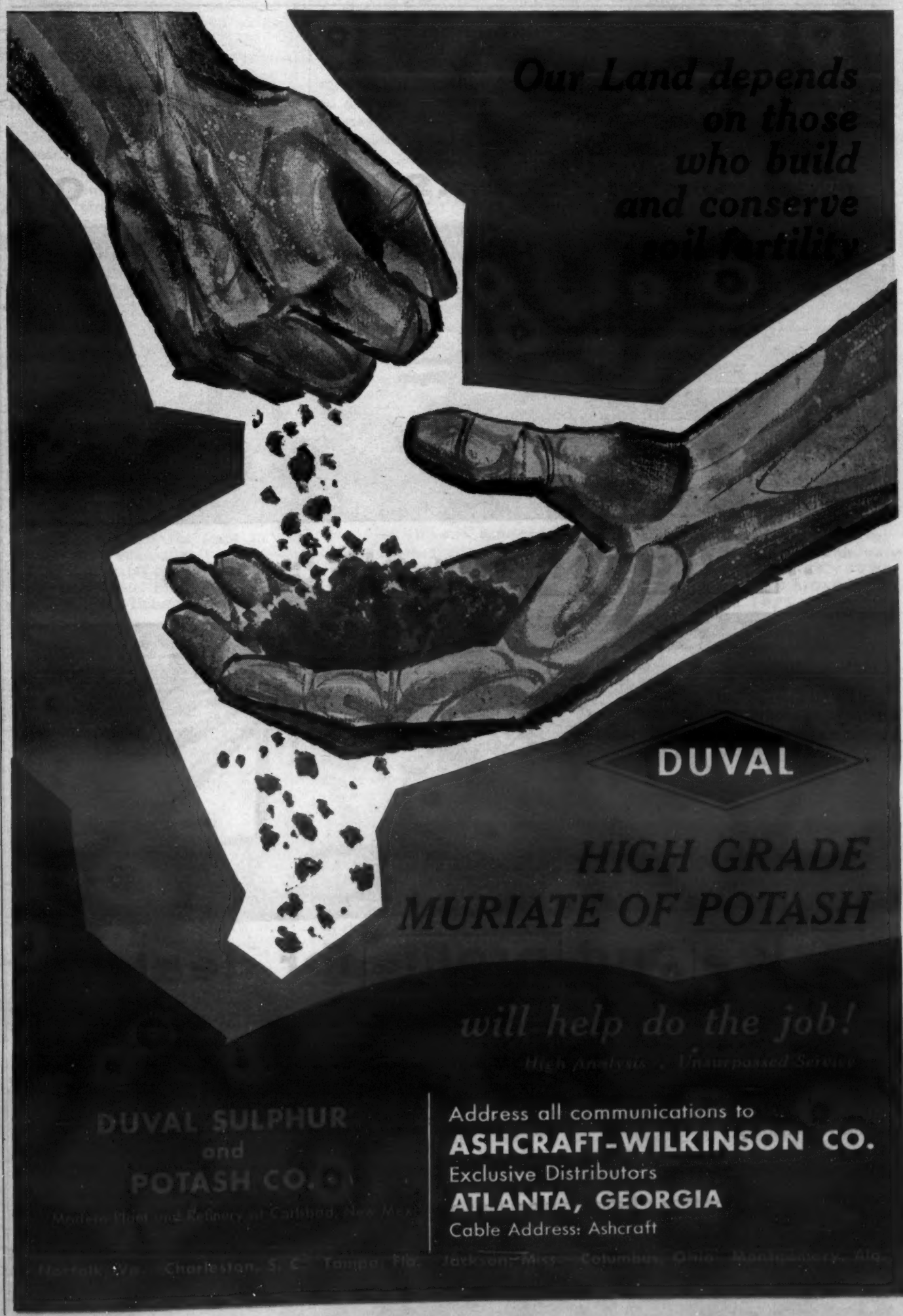
Weed growth in the three prairie provinces of Canada, Manitoba, Saskatchewan and Alberta, is reported to be heavy. Farmers are being urged to start spraying operations immediately. Wild oats have taken a firm hold and, because of the late start to the cropping season, it is expected that eradication plans for this weed have little chance of success.

While insect activity generally is light, grasshoppers are making their appearance in some sections of southern and central Manitoba. Infestation is described as heavy. The authorities are encouraging farmers to use spray poisons rather than the older method of laying poison bait.

This year the Manitoba agricultural department has adopted a new policy. The job of stocking and servicing farmers is to be left to the trade. Farmers requiring supplies will get a rebate of half their costs if the expenditure exceeds $10.

MARYLAND FIELD DAY

COLLEGE PARK, MD.—Research work involving methods of establishing grass and legume seedings for pasture and hay will be of prime interest at the University of Maryland's agronomy field day, June 26, reports Charles P. Ellington, university extension agronomist. Conventional methods of broadcasting fertilizer and seed will be compared with newer trend of banding both the fertilizer and the seed, he says. The field day will also feature lime, fertilizer and time of cutting studies on alfalfa and orchard grass-ladino clover as well as experiments involving rotation versus continuous cultivation and continuous grassland. The research farm is five miles northwest of College Park.



Rains Pep Up Crops, Increase Activity of Insects in Mid-South

MEMPHIS, TENN.—Welcomed rains swept Mid-South farms areas last week, bringing relief to crops threatened by drouth.

But with the rain came reports of increased infestation of boll weevils and thrips, extension officials of Arkansas, Mississippi, Missouri and Tennessee said.

The warm, damp weather was ideal for boll weevils and other insects, which have begun to attack cotton in growing numbers. Some pink boll worms were reported in Louisiana parishes and precautionary moves were taken in Arkansas.

S. J. McCrory, agricultural commissioner, Louisiana, warned that the state's cotton crop faces "a serious loss" from the pink bollworm. The pink bollworms have been found in cotton blooms at the earliest time in history and the early infestation "is a definite indication of a tremendous buildup in the numbers of this pest by harvest time," he said.

Increased infestation of boll weevils means cotton farmers will have to begin applying their poison soon to combat the weevils, which are more numerous than last year at this time.

Some seed diseases have shown up, but other than the insect trouble, the crop situation is favorable through the Mid-South, the extension officials said.

The rains in West Tennessee relieved a dry spell which was beginning to worry cotton farmers and cause damage to pastures and commercial tomatoes.

Judd Brooks, district farm agent at Jackson, said the warm weather had been beneficial to small grains and hay. The row crops were beginning to show acute needs for moisture.

Boll weevils are beginning to show signs of life in this area, Mr. Brooks said. While only a few mature weevils have been reported, feeding signs are becoming increasingly apparent.

Rain also brought relief from a growing drouth threat throughout most of Mississippi, the Mississippi Agricultural Extension Service said.

Pastures and corn crops especially responded to the moisture.

Because of wet fields, farmers have been unable to keep cotton as grass-free as they would like and many fields are in danger of becoming grassy.

Home gardens, especially those slightly behind schedule, benefited greatly from the rains.

A. G. Bennett, extension entomologist, said the fruiting cotton is being damaged by boll weevils, boll worms, tarnished plant bugs and cotton flea hoppers.

Rain temporarily halted harvesting activity of tomatoes, beans and peppers, but volume market movement is expected to begin again around the first part of this week.

General rains throughout Arkansas were a boon to farmers, although need for extra moisture was not great in Northwest Arkansas. rains slowed field work.

The Arkansas Agricultural Ext sion Service said cotton contin in fair to good condition with g clean stands and well cultiva fields the general rule in most ar

Practically all of this year's cot crop has been chopped. Howe there were some unfavorable thi beginning to show up—seedling d eases, thrips in some areas and wet weather of last week were pected to increase boll weevil tr ble.

Soybeans were off to a favora start. Combining of small grain w in full swing in most areas up to t rains.

Harvesting of early peaches is g ting under way, and truck crops we being harvested.

INSECT NOTES

(Continued from page 5)

apply control measures promptly.

The climbing cutworm or cott cutworm is attacking corn in Pa County. This is a black cutworm wi yellow stripes on its sides.

Pea aphids are still very abunda in both cut and uncut alfalfa a clover in eastern Iowa. Populatio range 10 to 50 per sweep. Lady bee adults and larvae, and aphis lion la vae are numerous also and may co trol without help.—Harold Gunde son.

North Carolina Uncertain About Boll Weevil Number

RALEIGH, N.C.—The boll weev picture is still not clear in the sout eastern counties as many fields a pear not to be heavily infested. Som fields are heavily infested whil others show very few weevils. Square are getting large enough to be in fested in many fields in that are hence treatment will pay off whe the infestation is sufficient.

The lower Piedmont does not ap pear generally and heavily infested a this time. With warmer weather, w may still have large numbers show u and we must still expect the wors and be prepared as the trash count indicate at least moderate number generally overwintering in the lowe Piedmont.

Reports of aphids in fields have come in from most all areas. With the general rains new growth has appeared. It is still believed treatments would not pay in most cases. Lady beetles are numerous and most likely will hold the infestation in check.

Thrips are still numerous in a fe fields in the Monroe and Shelby area and in some fields treatments woul still help. Some applications have al ready been made. Conditions in eac field must be considered as the plant in some cases are growing rapidly an showing evidence of withstanding th attack and will soon show little effec from the pests.

Grace-Cosden Merger Agreement Terminated

NEW YORK—The merger agree ment between W. R. Grace & Co and Cosden Petroleum Corp. has bee terminated, according to a joint an nouncement made recently by J Peter Grace, president of W. R. Grac & Co. and Raymond L. Tollett, pres ident of Cosden Petroleum Corp.

Cosden's proven reserves of crud oil as estimated by DeGolyer an MacNaughton, independent geologist of Dallas, Texas, were below th minimum figure of 17,765,000 barrel stipulated in the agreement. As th management of Cosden, after poll ing members of its board of di rectors, was unwilling to consider a lower price, the agreement was ter minated.

...sure source of ...nitrogen for all crops

...sales and profits for dealers

Today, more than ever before, cost-conscious farmers look to nitrogen fertilizers to help increase yields and profits.

Grace Urea Prills is a sure source of reliable, quality nitrogen to thousands of successful farmers. They've found this high analysis 45% nitrogen does a great job of growing all crops faster . . . bigger . . . at far less cost — and labor — than lower analysis fertilizers.

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A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

How to Use Agronomy As a Sales Tool

Editor's Note

This paper, entitled "How to Use Agronomy as a Sales Tool," was prepared in original form by Dr. H. J. Stangel, Nitrogen Division, Allied Chemical & Dye Corp., Omaha, Neb. Croplife presents it here as a sales help to dealers who can make profitable use of the type of information contained in the article.

Basic knowledge of agronomy can be a useful sales tool to the fertilizer dealer, and when applied in the right manner, can step up sales volume. In many sections of the country, a combination of bad weather plus the poor financial condition of the farmer has resulted in his reluctance to purchase and apply fertilizer to his crops, but here are some ways in which the dealer may counteract much of this negative situation.

One profitable way to merchandise fertilizer is through selling nitrogen for side dressing. Most of the fertilizer sold at this time will be used this season.

However, this season there has apparently been an over-emphasis on carryover because of low yields and crop failure of the past season. As is well known, the corn plant at tasseling time, has used from 90% to 95% of all the nutrients it requires. When nitrogen, phosphate, or potash are in the plant, they are tied up in organic form in the stalk and leaves and must undergo decomposition before becoming available to the plant. Probably not more than 35% of the nitrogen, 35% of the phosphate and 60% of the potash applied last year will be recovered by the plant this year. These rates of carryover are about 10% to 20% greater than the usual rates in a good crop year.

With the lower plant populations prevalent in the corn belt this season, one of the best means to maintain high yields is through growing larger ears of corn. The average ear weight under high corn populations and high fertility is about half a pound. This year growers should strive for ¾ lb. and 1 lb. ears. No bigger plant is required to do this, but it does take adequate plant food, nitrogen, phosphate and potash to set a large ear and to fill it out properly. A poorly filled ear indicates that the plant it came from did not have an adequate supply of plant food.

Many farmers have planted reduced stands of corn this season because of very low subsoil moisture. In many instances only a starter fertilizer was used. Nitrogen will be necessary to keep yields up. Corn requires almost three times as much nitrogen as it does phosphate.

With many farmers using starters low in nitrogen but high in phosphate, the plant must depend upon side dressed nitrogen to balance out its requirements. This year, side dressing corn with nitrogen will be one of the best investments the farmer can make.

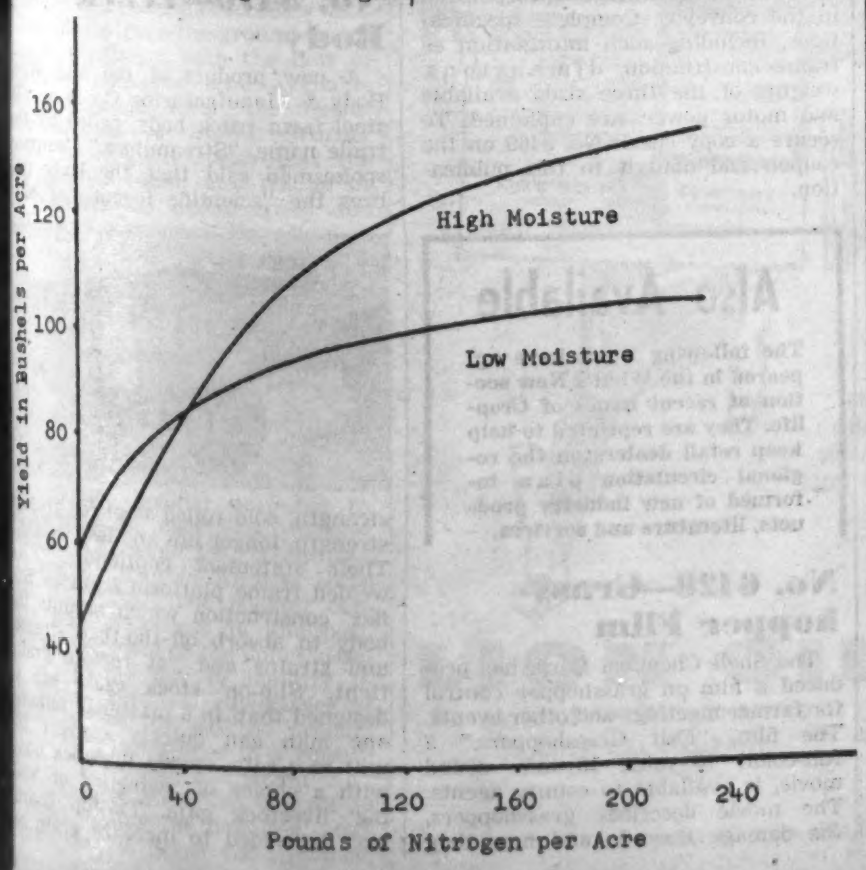
Many farmers and even some dealers are pessimistic about the use of nitrogen in a dry season. Nothing could be farther from the truth. Unless we have a crop failure the application of nitrogen fertilizer is profitable—even under limited moisture conditions. The accompanying table shows the response of corn to nitrogen under high and low moisture conditions.

Many universities have shown that fertilizer enables the plant to use water more efficiently. It takes fewer gallons of water to grow a bushel of corn, wheat, etc. The following results are from the University of Missouri:

Adequate Fertilizer		No Fertilizer
79	Bushels per acre	18
16	Inches soil water used	14
5,600	Gallons water used/bu.	21,000
1.04	Inches soil water left	4.5

The above data shows that very little more water was used to produce

(Continued on page 14)



SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN

Croplife Merchandising Editor

This is the season for sizable fertilizer sales, necessitating bank loans in many cases. The result is that the dealer often finds himself a party to a three-member business deal. How one party cooperates with the other two will determine whether such a deal is satisfactory to all, or if a "short marriage" will result.

Lack of understanding by one party about the contract can cause misgivings. The farmer, being the buyer, has his side of the bargain to defend. What are some of his views about banks and farms? An interesting report comes from a group of South Dakota farmers who expressed their opinions about banks and bankers in a panel session at the recent South Dakota Bankers Assn. conference.

The farmers said they'd like to have their banker come out occasionally on the farm or ranch and visit their operations—and not necessarily at the time their note is due. They'd like him to come out and see livestock at the time it is brought. They would like an opportunity to explain the nature of their operations at some other time than exactly when the loan is due.

Farm customers emphasize that they like to be thoroughly briefed on what the business policies of the bank are. They recognize that as a business institution a bank may properly require certain things of its customers. They want to cooperate with these policies—but would like to know more clearly what they are so that they can cooperate voluntarily. This was particularly important with young farmers who had little knowledge of bank operations, they emphasized. Such matters as the overdrafts, and other details in handling the bank's business, are sometimes a source of confusion and embarrassment to well-intentioned customers.

The panel members also emphasized the importance of maintaining their local bank on a sound operating basis, and had no desire to see operating policies liberalized in order to give special consideration. Panelists were more interested in having a sound banking operation that would be able to serve them in the poor years as well as good.

Crops, Soils Rated As Biggest Concern In Wisconsin Survey

MADISON, WIS.—Crops and soils are the two subjects in which farmers feel that they can get the most help from county agents and agriculture extension workers, according to a survey of more than 600 Wisconsin families surveyed by E. A. Wilkening and Frederick Fliegel, University of Wisconsin.

One third of the farmers said they wanted help in problems of "crop production," and in "crop disease and insect damage." One fourth checked "livestock and poultry diseases," "soil conservation," and "marketing and prices" as topics in which they were interested in receiving information.

The farmers rated these items about the same way when they were asked what problems should concern the county agent most. "Crop diseases and insects" and "crop production" were ranked among the top three topics by 53% and 47%, respectively. "Soil conservation" and "marketing and prices" were each ranked among the top three topics by around two-fifths of the farmers.

One third of the farmers say they preferred some kind of reading material for obtaining information on subjects of interest to them. One fourth preferred personal visits by the county agent, and one-fifth liked meetings in the locality. The majority of these farmers said they usually received their first information about new farming ideas from farm papers, farm magazines and newspapers. But most of them mentioned other farmers, neighbors, or relatives as the source of information that helped them decide whether to try out the new idea.

When it came to getting information for actually putting the idea to work, these farmers mentioned the county agent, bulletins and the university most frequently.

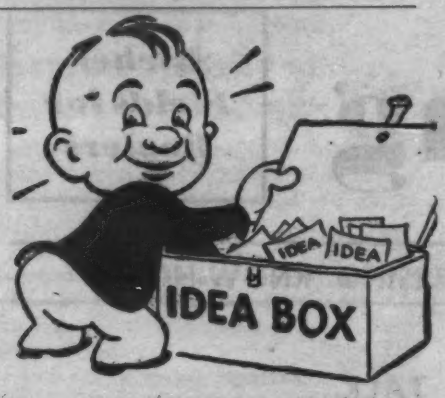
The same farmers were asked what they thought was the biggest problem in managing a farm. Half of them thought matters related to money were the biggest problem. For example, avoiding debt, making ends meet, building up capital, were some of the problems.

Traffic Puller

An appliance dealer in Minnesota drew 2,800 prospects into his store with a mating glove mail advertising promotion recently.

Some 8,000 promotion letters and left handed gloves were sent out at the rate of 200-400 at a time over a period of 12 weeks, and 35% of the people contacted came into the store to claim the right handed glove and register for an appliance drawing.

Cost of the promotion, according to the owner, was $1,337. He said that it was more than paid for in increased traffic and resultant sales during the 12-week promotion. The owner suggests that any matching items—such as stockings—can be used. However, he suggests that such a promotion be used infrequently so that it will have renewed appeal each time.



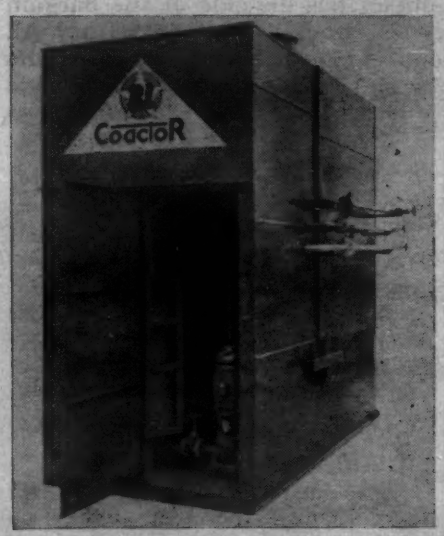
What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6427—Liquid Fertilizer Plant

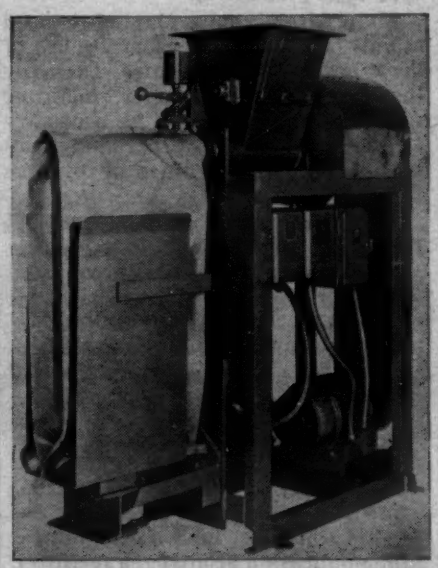
A new, continuous flow, neutral solution liquid fertilizer plant has been introduced by chemical plants division of Barnard & Leas Manufacturing Company, Inc. Claimed to be



the heart of the plant is the "B&L CoactoR," a self-contained liquid fertilizer processing unit. It consists of an automatic controlled reaction circuit with circulating pumps, evaporative cooling system and all necessary internal piping. It is designed for ready installation by connecting raw material supply lines, finished product lines and wiring for power. The "CoactoR" receives raw material direct from tank cars and produces a neutral solution liquid fertilizer that can be stored in ordinary non-pressure black iron tanks, company officials state. A wide range of ammonium phosphate solutions and complete fertilizer formulas can be produced as well as aqueous ammonia. Many soluble insecticides and weed kills can also be added to the solutions without destroying their effectiveness, it is claimed. The unit is automatic in operation. Controls are pre-set for the desired formula and can be changed for producing various fertilizer solutions. Automatic safety control instantly stops material flow if raw material supply is shut off. The unit is available in capacities up to 20 tons per hour. Complete details may be obtained by checking No. 6427 on the coupon and mailing it to Croplife.

No. 6430—Volumetric Packer

The automation principle applied to a bag packer in a manner that employs the bulk material being packaged to act as the motivating power source is one of the features of the new model VP Volumetric packer, recently announced by the H. L. Stoker Co. A company official states: "We are proud to announce this unit, with its special features, as a machine that almost thinks for itself, assuring uniformity of content volume with auto-



mated settling of material. We feel that it offers higher productivity, and surer volume control with an absolute minimum of care." Complete data on the unit is available without charge. Check No. 6430 on the coupon and mail it to secure more complete details.

No. 5469—Conveyor

A 4-page bulletin on the new Farquhar Ve-Be-Veyor aluminum power belt conveyor is available without charge, according to an announcement by the manufacturer, A. B. Farquhar Division, the Oliver Corp. The bulletin, which is fully illustrated, gives information on the construction advantages incorporated in the conveyor. Complete specifications, including such information as frame construction, dimensions, weights of the three sizes available and motor power, are explained. To secure a copy check No. 5469 on the coupon and mail it to this publication.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6428—Grasshopper Film

The Shell Chemical Corp. has produced a film on grasshopper control for farmer meetings and other events. The film, "Exit Grasshoppers," a full-color, 10 min., 16 mm. sound movie, is available to county agents. The movie describes grasshoppers, the damage they do and how they are controlled with modern insecticides. Recommended control practices are shown for both crop and range land. Filmed during two recent grasshopper wars, the film tells how aldrin, Shell insecticide, has been used to treat infestations. It shows a U.S. Department of Agriculture cooperative control project over millions of acres, and a University of Wisconsin aldrin spray demonstration in severely infested crops. Check No. 6428 on the coupon, clip and mail it to secure more complete details about securing the film.

No. 6424—Calcium Nitrate

A detailed booklet titled, "Calcium Nitrate for Wheat Production in the Pacific Northwest," has been printed by Wilson & Geo. Meyer & Co. The booklet, researched and written by Harley D. Jacquot, formerly with the State College of Washington, Pullman, is intended as a guide for Pacific Northwest wheat growers. Covered are such topics as need for nitrogen fertilizer for wheat, soil and climatic description in the Pacific Northwest, moisture and soil relationships, nitrogen-protein correlation, nitrogen utilization, soil fertility, cropping system, crop sequence, wheat varieties, temperature, soil moisture, time of fertilizer applications, results of experiments and field trials and future potential needs of fertilizer. The booklet may be secured by checking No. 6424 on the coupon and dropping it in the mail to Croplife.

No. 6423—Applicator Kit

New literature has been prepared by the Krause Corp. on its tractor-mounted applicator for liquid fertilizer. The applicator, which comes in kit form, permits the "farmer-owner to top dress or side dress with liquid nitrogen or other solutions at the exact time and rate he desires," according to company officials. The literature states that the heart of the applicator is a hose pump which is actually 12 pumps in one. A revolving reel applies pressure to 12 short lengths of plastic hose, creating pumping action in the same manner as milking a cow. If less than 12 outlets are required, hose may be ganged with "Y" fittings. Interchangeable sprockets provide any desired rate of application. The rate is said to remain constant regardless of ground speed, providing positive control of amount applied. Secure more details in free literature which is available. Check No. 6423 on the coupon and drop it in the mail to Croplife.

No. 5470—Truck Body

A new product of the Mid West Body & Manufacturing Co. is an all-steel farm truck body, called by the trade name, "Streamliner." Company spokesmen said that the body utilizes the "scientific forming of high-

strength, cold rolled steel for greater strength, longer life and less weight. Their statement continues: "The welded frame platform features 'Stiflex' construction which permits the body to absorb off-the-road stresses and strains and yet remain grain-tight. 'Slip-on' stock racks are so designed that, in a matter of minutes one man can quickly convert the unit to a safe, sturdy livestock body with a choice of 'swinging' or 'sliding' livestock gate. Tip-top boards may be added to increase grain ca-

Send me information on the items marked:

☐ No. 5448—Bag Seam	☐ No. 6424—Calcium Nitrate
☐ No. 5469—Conveyor	☐ No. 6425—Aphid Control
☐ No. 5470—Truck Body	☐ No. 6426—Liquid Fertilizer
☐ No. 6419—Applicator	☐ No. 6427—Liquid Plant
☐ No. 6420—Potash Booklet	☐ No. 6428—Grasshopper Film
☐ No. 6421—Speedometer	☐ No. 6429—Formulation Pad
☐ No. 6422—Brochure	☐ No. 6430—Packer
☐ No. 6423—Applicator Kit	

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COMPANY .....

ADDRESS .....

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Croplife

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Reader Service Dept. Minneapolis 1, Minn.

city." More complete details may secured by checking No. 5470 on coupon and mailing it to this blication.

o. 5448—Side Seam or Bags

A new overstitched side seam for rlap bags, which is said to elimite raveling of loose weft yarns on cut edges of the burlap, has been roduced by the Bemis Bro. Bag . The seam is called the "Edge-k." Loose weft yarns coming se and mingling with the product cked has long been a problem with rlap bag users, and has become inasingly so with the growing trend ward automatic feeders, automatic d planters and other mechanized m operations, according to comny officials. Reports indicate that seam completely eliminates the se weft yarn problem, they state. cure more complete details by ecking No. 5448 on the coupon and iling it.

o. 6420—Potash ooklet

A new booklet, entitled, "Potash in riculture," has been prepared by e American Potash Institute, Inc. ngle copies are available without arge but quantity shipments neces-ate a charge for the actual cost of inting, according to institute offi-ls. Sections are devoted to back-ound information about potash, its e in plant nutrition, potash in soils, agnosing needs, potash fertilizer aterials, application, crop response d history of the product. A number pictures and diagrams are part of e 34-page booklet. Check No. 6420 the coupon, clip and mail it to cure the booklet.

o. 6422—Brochure

A 16-page brochure about its origin, rmation, operations and three sub-liaries has been published by Min-als & Chemicals Corporation of merica. Also included are applica-ons for the company's products, nong which are carriers and dilu-ts in pesticides and wettable pow-rs, drying agents, catalysts and hers. Nearly 60 pictures illustrate e text. Free copies of the brochure e available by checking No. 6422 on e coupon and mailing it to Croplife.

o. 6421—Speed-meter

Details of a farm speedometer used coordinate over-the-ground speed farm equipment with the flow of nhydrous ammonia are available om the manufacturer, the instru-ent division of Stewart-Warner orp. The company states that the it, installed either on a tractor or g, registers the actual speed and tal distance traveled regardless of arying tire sizes, gear ratios, slip-age, etc. The speedometer registers eeds up to 10 miles per hour and mes in a complete kit. To secure ore details check No. 6421 on the upon and drop it in the mail.

No. 6425—Aphid Control Booklet

An 18-page booklet prepared by e agricultural chemicals division, merican Cyanamid Co., is entitled, Control the Spotted Alfalfa Aphid ith Malathion." The booklet con-ders the seriousness of the pest, story and spread of the aphid, dam-e to alfalfa, how to identify it, st plants, controls, advantages of alathion, how to use the product d points to remember in a control rogram. Advantages claimed for alathion are: Effective control in l areas, safety in handling, may e used next to barns and livestock, suitable for treatment for alfalfa to be fed to cattle, effective for mites, weevil larvae, leafhoppers and other alfalfa pests and availability in spray and dust formulations. The booklet is available without charge. Check No. 6425 on the coupon and mail it to Croplife.

No. 6426—Liquid Mixed Fertilizer

The Midstate Machinery Co. has prepared a brochure entitled, "Everything You Need to Manufacture and Sell Liquid Mixed-Fertilizer." Three separate liquid mixed-fertilizer plants have been designed by the company, according to the brochure. Each one can be assembled and erected locally or can be purchased with erection completed. Capacities range from 10-30 tons per hour. All plants incorporate the scale system, and ingredients are weighed as they are added during the manufacturing process. Described in the brochure are the company's facilities for providing equipment, training, chemical formulas, cost data, sources of supply and merchandising aids. To secure the brochure check No. 6426 on the coupon and mail it to Croplife.

No. 6429—Formulation Pad

A sample formulation pad for use in fertilizer mixing is being distributed free by the Nitrogen Division of Allied Chemical & Dye Corp. Mixing companies can use the sample as a suggested design in making up their own formulation pads, company officials state. The pad contains 90 identical forms which mixers can use in recording ingredients used in any given mixture. Inside covers of the pad carry three sets of tables: (1) Detailed analyses of nitrogen solutions; (2) the number of pounds of each solution that must be used to add specified units of nitrogen; (3) the equivalent acidity or basicity of all commonly used nitrogen carriers. A copy of the formulation pad may be obtained free by checking No. 6429 on the coupon and mailing it to Croplife.

No. 6419—Applicator

Details of a universal hitch applicator are available from the Pollard Manufacturing Co. Company officials state that the hitch permits rear mounting the mixed liquid fertilizer applicator to all tractors, regardless of model or age. Six-row and 8-row models are available. Boom height is adjustable. Secure more complete details by checking No. 6419 on the coupon and mailing it to Croplife.

SALESMEN... to help boost YOUR profits!

LION Advertisements Sell LION Nitrogen, *and* Your Mixed Goods, Too!

Continuous Lion advertising appears in leading farm publications, month-after-month, to pre-sell the Lion brand to farmers—and to sell the value of *your mixed fertilizers as well!*

Current advertisements are appearing in Farm and Ranch-Southern Agriculturist, Progressive Farmer, The Farmer, Nebraska Farmer, Kansas Farmer, Prairie Farmer, Wallace's Farmer & Iowa Homestead, Wisconsin Agriculturist and Farmer, Missouri Ruralist and Missouri Farmer. All of these advertisements are in color.

Each Lion advertisement promotes the economic benefits of properly using fertilizers, including Lion Ammonium Nitrate, to help increase the farmer's profits. Each advertisement sells *hard* on the importance of soil tests in the intelligent use of all commercial fertilizers. Lion, a leader in nitrogen production, leads the way to good fertilization practices . . . to better profits for you!

LION'S QUALITY LINE OF NITROGEN FERTILIZER MATERIALS

LION ANHYDROUS AMMONIA—82.2% nitrogen. Quality guaranteed.
LION AQUA AMMONIA—Ammonia content above 30%—other grades to suit your requirements.
LION AMMONIUM NITRATE FERTILIZER—Improved spherical pellets. Guaranteed 33.5% nitrogen.
LION NITROGEN FERTILIZER SOLUTIONS—Various types to suit your particular manufacturing needs.
LION SULPHATE OF AMMONIA—White, uniform, free-flowing crystals. Guaranteed 21% nitrogen.

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A DIVISION OF MONSANTO CHEMICAL COMPANY
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Doing Business With

Oscar & Pat

The early summer day was hot and humid. When Oscar came back from lunch and took off his yellowed sailor straw hat, there were many beads of perspiration on his wide forehead. Carefully he took a handkerchief from his pocket, wiped the wetness from the leather band inside the hat, then wiped his forehead.

He hung the hat up carefully on the coat rack. The hat was seven years old and Oscar often chuckled when he figured how much he had saved over the years by not buying a new straw hat. About every two years Minnie changed the band from black to dark blue, then next time back to black again, and so the hat always looked half new. The straw itself, however, had yellowed unevenly, but people didn't notice it unless they looked closely.

Sometimes when Oscar walked downtown shopping with Minnie, a friend would greet Oscar, then turn quickly and look back startled at the hat on Oscar's head, then grin and shake his head and mutter, "Boy, what economy."

But for the most part, Oscar got along fairly well with the seven year hat. Sometimes he hoped the summer would end Aug. 1 and the weather would get cold. Then he could save the straw hat for another year and wear his four year old black felt. But then a man could not always get the breaks.

"Huh, I see where Pat has been going through his magazines again," Oscar said snooping around, as he always did when he came back from lunch, as well as the first thing every morning. From habit his glance swept the floor to spot any stray paper clips, or rubber bands; then the wastebasket. Like a forager he seemed, but he was so neatly dressed all the time —even if his clothes were on the fringes of obsolete style—that foraging was not quite the word for his actions.

"Yes, Pat went to lunch about a half hour ago," Tillie, the plump, nervous bookkeeper said. She had a summer cold and was always blowing her nose with fresh yellow tissue.

"All these torn pages," Oscar said disapprovingly. "They are all over Pat's desk, and some are on the floor. Ach, they look messy. He forgot them. He is always in such a hurry to go to lunch. I'll put them in the wastebasket."

"I wouldn't," warned Tillie. "Pat may have a use for them."

"Himmel, what use would he have for those old pages?" Oscar snorted. "Why, he doesn't half read any of them. They just stack up higher and higher, those magazines. Ja, I should cancel all the subscriptions on Pat, like I did once."

Tillie shook her head. "Don't you do it," she said. "Pat was awfully mad. And remember, you and Pat promised me you'd not quarrel when I am in the office. My ulcer is getting a little better, and I want it to keep on getting better."

"Oh, who can stay quiet with that domkopf spending money all the day long?" Oscar said irritably, jamming lots of the loose magazine pages into the big wastebasket that stood along the desk. "Money burns a hole in his pocket. I would better have our money over in the bank, than in Pat's red hot pocket. In the bank it is safe."

At this moment, lanky, blue eyed and bushy haired Pat McGillicuddy came back from lunch. He wore a white Panama hat. "Whew, it is hot today." Then sighting Oscar bending over the wastebasket. "What are you doing, Oscar?"

Oscar's face was a little red. "I am cleaning up these loose magazine pages you threw around here. The place looks like a mess."

Pat's lips tightened. "Since when do your duties include cleaning up my desk?"

Oscar bristled. "Well, it looks like —" he glanced at Tillie—"a pig pen."

"I'll ask you now to leave my desk alone, Oscar," Pat said levelly. "Just so you have it for the record. I don't go prowling around your desk when you are gone, or straightening it either. But I will admit I have felt like dumping all your paper clips and rubber bands in the wastebasket at times, and throwing a pail of coal o top the whole bloomin' business."

Oscar paled. He was too shocked t speak for a moment.

"And those papers," went on Pa "they were valuable. I wanted t make use of them. And now you'v crumpled them up and made a mes of them."

Tillie Mason got to her feet. "Yo men promised not to quarrel," sh said, pale of face. "I feel my ulce acting up. Are you going to stop thi argument or finish it in the ware house?"

Pat looked at Oscar's stubborn fac and said. "Come into the warehouse Oscar."

Grumpily Oscar followed Pat int the warehouse. There with a stack of fertilizer bags between them, each stood in an aisle and faced the other Only heads were visible—and glaring eyes.

"It took me a long time to g though those ads," Pat said severely "I clipped a number of them, ads b manufacturers whose fertilizers, in secticides and other farm products we handle."

"Ach, what good are they?" asked Oscar.

"A lot of good. They will make extra sales for us. They contain a lot of good advice to farmers. I was going to post them on the wall with thumb tacks, then hang up a sign saying 'Read These . . . This Good Advice Appears in Farm Magazines This Month . . . Our Manufacturers Are Ready to Serve You and Help You Make Profit.'"

"Huh," said Oscar disparagingly. "They could read those ads in magazines."

Pat agreed. "That they could— but some won't. This way, when I have all those ads thumb tacked on a wall, farmers can see them all at once. The ads will make a big impression and help us sell."

Oscar looked sour and disbelieving.

"This ad," Pat explained, "says 'Why M. . . makes weed killing simple as 1-2-3.' This other one says, 'low cost fly control for dairy barns'."

"But this advice is all on the cans," Oscar complained.

"Sure it is," Pat said, "but it is in small type. It has to be. These ads are large. Farmers will read them, get the sales message and then maybe buy more. These posted ads of our manufacturers can help us make extra sales and we need them."

"We need cash, too," Oscar put in. Then pointedly. "From collections."

"Let's talk about that tomorrow," Pat said sharply. "Today I'll spend the rest of my time going through the other magazines clipping some more ads to post. And remember, my desk is private property. What I leave there, I want left there, until I get back."

Oscar's face went white with rage. "Even—even, if it's bills to be discounted, I suppose?"

"I don't care what's to be discounted," Pat said. "If mail or a note is addressed to me, I am the one to open it. If you don't respect my desk, you'll come some morning and find your precious paper clips and rubber bands out—out you know where." He pointed to a little building visible at the edge of the property through the open warehouse doors.

Oscar's lips got as tight as a ten year old's at the dentist. His back straightened, and his head went up. Then, without another word, he turned and marched back into the office.

FLY CONTROL PAYS

ST. PAUL—Beef steers and heifers gained 54 more lb. per head in a 91-day period where flies were controlled, compared to a check lot where flies were not controlled in a University of Minnesota experiment.

MANY SPRAYERS can be made *better-than-new* by replacement of a worn-out original pump with a husky, high-pressure, ball-bearing HYPRO pump designed specifically for farm sprayer service. A popular replacement pump is the model shown (No. N7500), made of long-wearing, corrosion-resistant Ni-Resist and capable of delivering up to 16 gpm (at 600 rpm) or developing pressures to 350 lbs. Other suitable models are available in either cast-iron or Ni-Resist and offer delivery maximums of 20 to 67 gpm, pressures up to 150 or 200 lbs. All are being used as standard equipment by an increasing number of sprayer manufacturers.

MORE FARM SPRAYERS USE **HYPRO PUMPS** THAN ANY OTHER KIND

FOR FREE CATALOGUE WRITE: HYPRO ENGINEERING, INC., MINNEAPOLIS 21, MINN.

What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

More than 1,100 persons attended the first annual meeting of the National Plant Food Institute in White Sulphur Springs, W.Va. June 10-13. Edwin Pate, Dixie Guano Co., Laurinburg, N.C., was elected chairman of the board, and Charles T. Prindeville, Swift & Co., Chicago, was named president.

The International Cooperation Administration announced it will make a study of the U.S. fertilizer aid program for Korea. The U.S. has been providing Korea with about $50 million worth of chemical fertilizers a year . . . A federal-state program for control of gypsy moths was being undertaken on 500,000 acres in parts of New York, New Jersey and Pennsylvania.

Results of a survey sent out to 48 states and U.S. territories by Rodney C. Barry, state chemist of Virginia, indicate that the use of fertilizer and pesticide mixtures is growing throughout the nation. More states than ever before report that such mixtures are legal and are being used in increasing tonnages within their borders.

United Heckathorn Co., Richmond, Cal., was awarded a contract for spraying 180,000 acres in Florida for control of the Mediterranean fruit fly which had infested a strip 10 miles wide and 35 miles long. Three applications of malathion were to be made, and soil applications of dieldrin and heptachlor will also be made in some areas.

A fertilizer consumption report issued by the National Plant Food Institute showed a decrease of 1.3% in overall tonnage for the calendar year 1955, as compared to the previous 12-month period. However, due to the manufacture of increasingly high analysis mixed fertilizers, the plant food content of the total was expected to show a slight increase. The total tonnage of fertilizers, as compiled by the Institute, was 20,416,410 tons. The previous high, in 1954, was 20,679,026 tons.

Although tonnages of fertilizers shipped thus far in the 1956 season do not measure up to those of last year, still the nutrient content of these materials was expected to hold up because of higher grades of mixtures. Thus indicated the U.S. Department of Agriculture in its supplemental report of the fertilizer situation for 1955-56. Trade observers, however, predicted that much of the tonnage loss may be made up later in the season.

A frost of record proportions was expected to damage New England crops to the extent of $10 million, according to reports from the states comprising this group. Crops affected by the frost included strawberries, sweet corn, peppers, beans, cucumbers, spinach and tomatoes.

International Minerals & Chemical Corp. announced that it would build a factory for the production of chemical plant food mixtures at Fairfax, Minn. The announcement was made by Maurice H. Lockwood, vice president in charge of the IMC plant food division. The new plant was expected to be in production in time for the 1957 season.

New approaches to weed control were discussed at the recent weed control conference held at Rutgers University, New Brunswick, N.J. USDA and University experts described the results of recent tests with various chemical compounds.

The new farm bill was regarded as a potential boon to the plant food industry, since the bill's provisions would encourage the use of fertilizer to achieve greater production on fewer acres, particularly in the corn belt states.

Results of two long-term U.S. Department of Agriculture studies on soil-saving practices showed that crop yields on reclaimed land could be greatly increased through the rebuilding of eroded slopes and increasing fertility levels through the application of plant foods. The tests were made in the vicinity of Waco, Texas.

The farm bill passed by Congress was expected to act as a stimulus to fertilizer sales in the U.S., according to USDA interpretations. However, a controversial issue was seen in the question of whether or not USDA would permit commercial corn belt farmers to comply with the original acreage allotment of 43 million acres, or the higher 51 million acre allotment, in order to participate in the soil bank program as outlined in the bill.

The Maryland Governor's Safety-Health conference at Baltimore devoted an entire day to fertilizer safety. Speakers included Curtis A. Cox, Virginia-Carolina Chemical Corp., Richmond, Va., national chairman of the fertilizer section, and representatives of the National Plant Food Institute and the fertilizer manufacturing trade.

Albert L. Taylor was named to succeed Dr. Gotthold Steiner, as head of plant nematology research in the U.S. Department of Agriculture. Dr. Steiner recently retired after a career of 34 years in the department.

Emphasis was placed on the specificity of pesticides of the future, by speakers at the recent Western Agricultural Chemicals Assn. meeting at Los Angeles. Speakers described newly-developed insecticides, fungicides and weed killers.

The annual U.S. Department of Agriculture report on the pesticide situation for 1956, confirmed what has been voiced around the industry for some time: namely, that the supply situation for this year is ample. Further, however, the report predicted a good season ahead, based on information received about the presence of unusual numbers of over-wintered pests in different areas of the country.

The crop reporting board announced that the average yield of lint cotton in 1955 had been 417 lb. an acre, which set a new record for the third consecutive year. This figure was 76 lb. above the previous record set in 1954, and was 138 lb. above the average.

Plans to apply grain protectant insecticides to some ten million bushels of stored Commodity Credit Corp. corn were announced by USDA. The Department purchased some 3,600 gal. of concentrate for the purpose. Successful low bidder was Thompson-Hayward Chemical Co., Kansas City, Mo. Price was $24.46 a gallon.

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Mathieson sprinkler irrigation systems are *complete* from intake strainer to pipe end cap. Each component part is precisely engineered to work most efficiently as a unit. The trouble-free service, better design and long life mean more profit for you and more profit for your customers.

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PUMPS Dependable, high pressure centrifugal pumps with matched engines for maximum efficiency.

POSITIVE LOCK COUPLERS
No moving parts to jerk loose. Provide easy, trouble-free operation.

SQUARE SHOULDER GASKETS Leak proof and blowout proof.

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Positive performance and reliability guaranteed.

EXTENDED FOOT
Elevates and positions for easy coupling. Keeps grass and weeds from pipe end.

ALUMINUM PIPE Length and diameter to fit exacting requirements of each completely engineered system.

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4017-A

OLIN MATHIESON CHEMICAL CORPORATION

PLANT FOOD DIVISION • LITTLE ROCK, ARKANSAS

The Bulletin Board

No. 19 in a series from the Spencer Chemical Magazine, "Today's Fertilizer Dealer"

Customers poured into Bill Strong's store after he installed a modern soil test lab. In fact, Bill doubled sales in a year when other dealers were experiencing a recession. Bill, right, and Jerry Schmanske, talk over test results with a soil test client.

How Bill Strong Doubled Sales in a Slack Year

In these days of the tight squeeze fertilizer dealers are finding that an extra service is often the difference between coming out behind and coming out ahead. Take the case of Strong and Strong, with stores in Ottawa and Earlville, Illinois.

In 1954, Bill Strong in Ottawa sold 1,437 tons of fertilizer. Brother Bob in Earlville sold 1,043—nearly the same amount. Then in January, 1955, Bill of Ottawa put in a soil testing lab. Brother Bob of Earlville did not. By mid-April, Bill had sold 2,000 tons of fertilizer, while Bob had sold only about 500 tons. By the end of the season, Bill actually doubled his '54 tonnage, with 2,859 tons of mixed goods sold! This was all at a time when Bill's neighboring dealers were experiencing a fertilizer depression.

One reason for Bill's spectacular success is that his lab is one that inspires confidence. No test kit operation, its reagents are bought from the University and thrown out before they lose their strength.

And results are correlated with the University. Moreover, Bill has first-rate assistance on the testing. Jerry Schmanske, who has had soils schooling at the University of Illinois, writes up the recommendations, and Vic Bute, another Strong and Strong man, runs the tests.

At first, the test took a lot of promoting. Jerry discovered that it didn't do any good to approach a farmer and ask him if he was interested in testing his soil for 100-bushel corn. Usually the farmer declared—and believed—that he already was making 100 bushels. Often he was making more like 80 or 60.

But when a few tests had actually been made, and the results reported, the surprised farmers became enthusiastic. The tests caught on.

Strong and Strong now charges $1 a sample if they have to go out and get it. If the farmer wants to do it himself, a detailed instruction sheet is available. Bill Strong takes one sample out of five acres and about five augerings per sample, so it's no easy task. Then if the soil test customer buys his fertilizer from Bill, the test is free.

The lab uses the Wisconsin test for nitrogen, which they say is about as accurate a nitrogen determination as is now available and gives you a reasonably clear picture of the needs. The soil test includes pounds of nutrients available, soil pH and recommendations for nitrogen, phosphate, potash and lime.

Bob Strong's Earlville store has also used many ingenious and powerful promotion campaigns. But so far, nothing either brother has done has moved goods like Bill's soil tests.

To Fertilizer Dealers ONLY

SPENCER CHEMICAL COMPANY
609 Dwight Building
Kansas City 5, Missouri
Gentlemen: I am a fertilizer dealer not presently receiving **Today's Fertilizer Dealer magazine.** Please send me a free subscription without obligation.

Name.....
Firm.....
Post Office.....State.....

AGRONOMY AS SALES TOOL

(Continued from page 9)

the large increase in yields of corn. Observations by these research people indicate that less water was lost by runoff and evaporation on the fertilized plots than on those which received no fertilizer.

Soils men in North Dakota say that if there is enough moisture to plant a crop, it is also profitable to fertilize it properly. They point to experimental results in which they compared the yield and rate of water use of fertilized and unfertilized wheat. They found the fertilized wheat used a little more water each day during the growing season but matured earlier. At the end of the season the fertilized wheat had used no more total water than the check plot which had received no fertilizer, but had produced five bushels more wheat per acre.

Of all the investments which a farmer makes, fertilizer is the only one which is not lost in a crop failure. Seed, time, gas and oil, labor—all these are irreplaceable, but plant food is removed only when a crop is removed. Farmers should be reminded of this fact, and also that any crop worth planting, is worth fertilizing.

This is the season when dealers should be using agronomic knowledge to sell fertilizers. The signs and symptoms that indicate either high or low fertility should be learned to help clinch the sale. Sound advice and production hints to the farmer will help the dealer to build a strong service aid to his sales program.

Deficiency symptoms are very plain if one learns to recognize them. Deficiency symptoms in local crop areas should be studied in particular.

The book "Hunger Signs in Crops" gives specific symptoms for all the major crop plants. The pictures are in color. It is available from either the National Plant Food Institute, Washington, D.C., or from Croplife. Price is $4.50.

How does a deficiency of nitrogen show up? As a general rule, it is seen in the lower leaves first. When the plant cannot get enough nitrogen from the soil, it moves some of the nitrogen out of the old lower leaves into the younger upper portions of the plant and uses it to produce new leaves. The lower leaves will become pale green and then yellow, along the midrib of the leaf from the tip. "Firing" of the lower leaves of corn in July and August is the result of this process. This double use of nitrogen in the plant is inefficient and lowers the yield. Side dressing with nitrogen will prevent this.

Nitrogen deficient wheat plants are observed very readily during May, but one should not mistake yellow leaves at this time for those which have been killed by frost during the winter. The fall leaves of winter wheat killed by the frost will be brown, shriveled and very small. They will be found at the base of the plant. Yellowish leaves found above this are nitrogen deficient and have been formed in the spring.

Plants usually show phosphate deficiency when they are less than 18 inches tall. The plant is slow starting, stunted and in severe cases, purplish in color. Before sugar is moved in the plant, it is combined with phosphorus. The sugar which cannot be moved out of the leaf is changed to a red pigment which appears purple when mixed with the green chlorophyll of the leaf. Phosphate promotes root growth and seed formation.

Corn and wheat show potash deficiency by yellowing or browning of the outer edge of the lower leaves of the plant. This is also a process of removal from the lower leaves into the younger portions of the plant to produce new growth. Potash helps to move nutrients in the plant. Without adequate potash the ears or heads will not fill properly. Little sugar or starch can be put into the kernels without adequate potash.

A balance of all the nutrients is required to hit top yields. Side dressing with nitrogen will be most profitable when plenty of phosphate and potash are present.

The most common cause of poorly filled out ears or heads is shortage of plant food.

Nitrogen is required all through the growing season. A shortage of nitrogen produces ears that are small and not well filled at the tip.

Ears are small and twisted when phosphate is limited. Barrenness and poor seed set are also indications of a lack of phosphorus. Pollination troubles are usually prevalent if phosphorus is in short supply. Whole rows of kernels may be missing.

Chaffy nubbins are an indication of the lack of potash. The tips are poorly filled out and kernels may not even begin to fill at the tips.

Urine spots are the most frequent indications of the need for fertility in fields of small grain and pastures. Urine spots will be noticable right up to harvest. Plants from these spots will be taller and greener, will have more tillers, will produce heads sooner, will produce larger heads and will mature earlier. These differences should be pointed out to the farmer with an explanation of how nitrogen, phosphate and potash, especially nitrogen will increase his profit by increasing yields. Such knowledge of agronomy can really stimulate sales.

When fields like this are chosen for demonstrations, results can be assured.

Oats fields sown on disced corn stubble are excellent places to show the need to apply nitrogen to decompose the stalks and fertilize the growing crop. Pale green spots or yellowish spots will show up in these fields. An accumulation of residue will be found beneath the oat plants in these areas. These should be dug up and shown to the farmer. The bacteria are particularly active in these areas. They get the nitrogen before the plant does. Top dressing these fields with nitrogen will feed both the bacteria and the oat plants.

These fields will be an excellent place to demonstrate the use of nitrogen fertilizers.

This leads to the idea of demonstration plots. Most farmers are now using some fertilizer, but not at the rates that would be most profitable to them. Demonstration plots should be set up to show not only what fertilizer will do but what higher rates of application will mean to the farmer in terms of higher yield and more profit. The farmer should be encouraged to leave not only a check strip but also to leave a strip where he doubles back and puts on twice the usual amount.

In planning demonstrations for high yields one must take into consideration the "delivery ability" of the soil. Even though soil test may show a good supply of phosphate or potash, the soil may not deliver nutrients as fast as the plant may require them. The application of fertilizer under these conditions will give a response even though soil test indicates a supply adequate for an average crop.

Every farmer should be encouraged to have at least five acres where he tries all these "new fangled things" he hears about. Each farm has its own particular problems and the farmer will often modify an idea to make it workable on his own farm.

Fertilizer helps to cut the cost of production. Fertilizer is the best investment the farmer has. Nebraska tests show it is possible to increase the yield of irrigated corn 100 bushels

an acre by the addition of 160 lb. nitrogen an acre. It cost only 20 cents per bushel to produce the increase, a profit of $1.00 per bushel!

Nitrogen increases the uptake of other soil nutrients. By the use of radio-active phosphorus, Nebraska soils scientists have found that the addition of fertilizer increases the plant's uptake of fertilizer phosphorus.

Greater efficiency is obtained from other fertilizer nutrients by the use of adequate nitrogen!

The dealer should get to know his county agent. Ask him to help lay out a demonstration for a field day you, the dealer, intend to hold. Invite the county agent to your field day. And don't forget to offer him a few gallons or bags of fertilizer for use in his county demonstration plots.

A dealer might also get out a five-acre plan of his own or ask for help in making one up. If a contest is made out of it and the farmers are brought together in the fall to talk over their experiences, success will follow. They should be encouraged to give their ideas on how they can consistently produce top yields at the lowest possible cost.

The best service that can be offered to the farmer is that which stimulates him to think about how he can best use the dealer's products on his farm!

New Entomology Chief Appointed at Purdue

LAFAYETTE, IND.—John Vincent Osmun has been named head of the entomology department at Purdue University effective July 1.

The appointment was announced by Dean H. J. Reed, director of agricultural activities at Purdue, following appointment by the board of trustees.

Mr. Osmun, who joined the Purdue entomology staff as assistant professor in January, 1948, has been on leave the past two years completing work on his doctorate at the University of Illinois. He will receive his degree this month.

Mr. Osmun will succeed J. J. Davis who has served as head of the entomology department at Purdue since he joined the staff in 1920. Mr. Davis will retire as head of the department July 1.

Mr. Osmun received his B.S. degree in entomology in 1940 from Massachusetts State University, and his M.A. degree in biological sciences at Amherst College in 1942. He had a Woods Hole Scholarship in biology during the summer of 1941.

To Attend Harvard

ST. LOUIS—John L. Hammer, Jr., St. Louis, director of marketing for Monsanto Chemical Company's organic chemicals division, has been granted leave of absence to attend the fall session of the advanced management program at the Harvard University Graduate School of Business Administration.

Mr. Hammer will be the 34th Monsanto executive to attend similar courses as part of the company's program for developing key employes. The fall session will begin Sept. 12.

PRAIRIE MAMMALS

MANHATTAN, KANSAS—Despite dry weather, two of Kansas' most destructive small prairie mammals are being found in increasing numbers in the eastern part of Kansas. Populations of cotton rats have multiplied several times in the eastern third of the state, while there has been a 200% increase in the number of meadow mice in the same area, reports H. T. Gier, Kansas State College zoologist.

Pre-Emergence Sprays Give Good Control on Corn in Missouri Tests

COLUMBIA, MO.—In weed-control tests on corn made at the University of Missouri the past three years, best results were obtained from pre-emergence spraying, Hale Fletchall told farmers attending the recent annual Soils and Crops Field Days at Columbia.

The university field crops specialist said plots with no weed-control treatment yielded 47 bu. an acre, plots treated with post-emergence sprays made 53 bu., while pre-emergence sprays increased the yield to 61 bu.

Mr. Fletchall showed the visitors plots where pre-emergence sprays are currently being used on corn, soybeans, and legume and grass stands. He told the farmers attending the event that the use of herbicides on soybeans has resulted in increased yield and reduced weed population in seven experiments conducted in the last three years. Increases have resulted in the extremely dry years as well as under favorable conditions.

Herbicides do best when they are applied to soybeans after planting but before they have come up, he said. It's important that the soybeans be planted not less than one inch deep in a well prepared seedbed. These treatments give control of weeds for three to five weeks, allowing delay of the first cultivation and take the place of at least one cultivation during the season. Since the first cultivation is delayed, soybeans are larger, allowing more rapid cultivation than is usually practiced.

GETS RESEARCH POST

CORVALLIS, ORE.—Kendell G. Woodward, 1956 graduate of Utah State Agricultural College, has been named research assistant at the Pendleton branch experiment station of Oregon State College. He will work on fertility and yields of dryland wheat, alfalfa and peas.

GARDEN TRADE SHOW

PORTLAND, ORE.—Sixth Annual Pacific Northwest Garden Supply Trade Show sponsored by Oregon Feed and Seed Dealers Assn. is scheduled October 23-24 at Shrine Auditorium here.

It Takes TWO to Fight Grain Infestation and Douglas Has Both

1. Douglas HAS THE KNOW-HOW

Grain sanitation problems? Solving them is part of the stock and trade of Douglas. Whether you need experience and know-how for your own problems of grain sanitation or for those of your farmer customers, you can rely on Douglas to help you with those problems. More than 40 years of experience has made Douglas the most responsible and qualified source for the solution of your grain sanitation problems.

WHEREVER THERE IS A GRAIN SANITATION PROBLEM THERE IS A NEED **FOR DOUGLAS!**

2. Douglas HAS THE PRODUCTS

In addition to broad experience in the field of grain sanitation, Douglas offers you a complete line of proven grain sanitation products. Whether you are in the grain storage business or resell our products to others who are, you can always depend on these Douglas products!

DOUGLAS TETRAKOTE®

. . . the liquid grain protectant that stops insect infestation before it starts.

DOUGLAS TETRAFUME®

. . . the grain fumigant that gives you 4-way protection and grain conditioning.

DOUGLAS TETRAKIL®

. . . for effective on-the-farm grain fumigation and for commercial flat storage.

DOUGLAS SPECIAL MILL SPRAY

. . . the surface and space spray that protects the surface of stored grain from insect attack.

DOUGLAS FARM BIN SPRAY

. . . the active residual spray for you and your customers to use to rid empty bins of insect infestation.

FREE Brochure

Send for copy of new brochure that tells complete story of Douglas TETRAKOTE and how it is effectively combating the problem of grain sanitation. Mail coupon today.

DOUGLAS CHEMICAL CO.
620 East 16th Avenue, North Kansas City, Missouri

- ☐ Send literature on following Douglas products:
- ☐ Send free copy of TETRAKOTE Brochure.
- ☐ Send movie reservation information.
- ☐ Have a Douglas representative call on me.

NAME_____

COMPANY_____

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TOWN_____ STATE_____

To make your selling job MORE PROFITABLE!

...outstanding performance for your customers.

Good product performance means satisfied customers who keep coming back to you for their needs. And Phillips *66* Ammonium Nitrate delivers *outstanding* performance. It is guaranteed to contain 33.5% nitrogen, and is prilled to flow freely, handle easily. New multi-wall polyethylene bags (80 and 100 lb.) help to preserve free-flowing quality.

HERE ARE YOUR

EXTRA PHILLIPS *66* BENEFITS!

You'll benefit from the many extras you get from Phillips *66* service—in prompt deliveries and personal service from your Phillips *66* fertilizer field man.

You have the assurance of dealing in products backed by one of America's great names in chemical fertilizers when you sell Phillips *66* Ammonium Nitrate.

The Phillips team of agronomists, engineers and production men is constantly using its skills to maintain and improve the uniform high quality of Phillips fertilizers.

This high quality standard, plus prompt delivery and powerful advertising support will make your selling job more profitable this year—and in the years to come.

It's Performance That Counts!

PHILLIPS CHEMICAL COMPANY

A Subsidiary of Phillips Petroleum Company

Bartlesville, Oklahoma

A COMPANION HIGH NITROGEN FERTILIZER, NOW AVAILABLE IN 80 AND 100 LB. BAGS

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AMARILLO, TEX.—First Nat'l Bank Bldg.
ATLANTA, GA.—1428 West Peachtree Street
BARTLESVILLE, OKLA.—Adams Bldg.
CHICAGO, ILL.—7 South Dearborn St.
DENVER, COLO.—1375 Kearney Ave.
DES MOINES, IOWA—6th Floor, Hubbell Bldg.
HOUSTON, TEX.—1020 E. Holcombe Blvd.
INDIANAPOLIS, IND.—1112 N. Pennsylvania St.
KANSAS CITY, MO.—500 West 39th St.
MINNEAPOLIS, MINN.—212 Sixth St. South
NEW YORK, N. Y.—80 Broadway
OMAHA, NEB.—WOW Building
PASADENA, CALIF.—604 Citizens Bank Bldg.
RALEIGH, N. C.—804 St. Mary's Ave.
SALT LAKE CITY, UTAH—68 South Main
SPOKANE, WASH.—521 E. Sprague Ave.
ST. LOUIS, MO.—4251 Lindell Blvd.
TAMPA, FLA.—1214 South Dale Mabry
TULSA, OKLA.—1708 Utica Square
WICHITA, KAN.—501 KFH Building

RINGING THE cash register

Merchandising Hints for The Retailer

Dead Stock

The actual selling space of the average retailer is smal perhaps between 25% to 30% of the total space be available for making sales. Therefore, it is import that he make the maximum use of his selling space. must make sure that every square foot of his warehou office, aisles and display areas is used to the best vantage. In a survey recently one store was discover to have $1,200 worth of dead stock on its shelves. T points up the importance of allocating shelf space table space according to sales performance. Dead st must be weeded out and replaced with merchandise t turns over readily. An inventory will show up dead st quickly and indicate what ought to be cleaned out. T space should be used to better advantage in providi more selling space or to quick-turnover items.

Use Part Time Help

Part time or temporary employees can solve the probl of retailers who have seasonal peaks in their work lo A survey by the Mutual Employers Association, Inc., Los Angeles showed that less than 5% of firms check use the part time or temporary worker. Yet over one th of the employers expressed a desire to use part time temporary employees. Such an employee offers the adva tages of coming in when he is called, spending conce trated effort on the job he is assigned and often departi before his lunch period. His work time need not be int rupted by employee meetings, work breaks, etc. He e pects to be laid off when the peak season is over. M communities have a goodly number of retired persons a students available for part time work. An advertiseme in the home town or high school newspaper or placing notice with the state employment office will usually bri inquiries for little or no cost to the employer.

Stick to Policy

A controlled credit and collection policy is advocated Art Hunt, credit manager, Maritime Milling Co., I Such a policy should serve a two-fold objective of creasing credit sales volume and at the same time decreasing the cost of credit business. According to Mr. Hunt, this means (1) Sound and fair terms should be established and clearly explained to the customer. (2) Accounts in any substantial amount should be opened only after adequate investigation, and (3) Credit terms, for the protection the dealer as well as the consumer, should be strict enforced. The most liberal credit terms are not alwa the most sound. Bankers and fellow merchants are v uable sources of information about a farmer's charact and ability to pay. Obtaining information as to wh the prospective customer's feed purchases have be made in the past provides valuable credit informati Mr. Hunt states that unless credit terms are enforc the whole credit policy falls apart. The suspension pr ciple is the heart of credit control; that is, establi your limit both as to time and amount and refuse furth credit sales until the overdue account is paid, he says.

Spruce Up Back Door

The use of the back door for customers is growing cause of the development of parking lots to the rear stores. Customers naturally prefer to use a short cut enter stores. Back door trade can be encouraged if t entrance is spruced up to make it more attractive a convenient. The back door should be marked plainly, tractively painted and provided with adequate steps. T entry way should be cleared and inside the store a c venient aisle should be provided. Make sure that the d and handle are not cumbersome and difficult for women open. Encourage your back door customers with th conveniences and many of them will be bigger buy than your front door patrons.

Take A Look

Some retail stores, because of buildings on two adjac sides, need to provide a rear entrance. Some mercha report as high as 80% of their customers use park areas in the rear. For these merchants, the rear entra is the main entrance and suitable facilities must be p vided. The rear entrance in those cases should be p perly identified, steps (if necessary) should be in g repair, a well defined traffic aisle leading to the m part of the store should be provided and in many ca a canopy over the entrance can serve its purpose w If a ramp is necessary it is wise to use an abrasive non-skid finish for the surface.

. . . for richer sales fields . . . this Fall!

MEMO

TO: Advertisers to the Fertilizer Industry

SUBJECT: CROPLIFE's Fall Fertilization Special Issue of July 23

Every advertiser interested in the fertilizer industry has a big stake in the promotion of fall fertilization. CROPLIFE, the only weekly newspaper serving the agricultural chemical industry, will publish a special **"FALL FERTILIZATION" issue**—July 23, 1956—which will editorially feature this important subject, and provide an unprecedented opportunity to place before the industry and midwest dealers **your advertising message!**

Here's a capsule preview of this special issue:

Fall Fertilization: discussion of economic advantages and agronomic aspects involved in fall application . . . of problems faced by industry in trying to manufacture and store adequate amounts of plant food materials and then attempting to deliver year's output in brief spring period . . . photos showing spring jam of trucks and farmers "fighting" for supplies of fertilizer . . . plus tie-in editorial comment on wastefulness of this buying pattern . . . a graphic presentation of Dr. Firman E. Bear's map showing areas where soil is adaptable to fertilizer application in the fall.

Agronomists Express Viewpoints: statements of college and industry agronomists on fall fertilization.

Directory of Available Sales Helps: special section of July 23 CROPLIFE will feature an illustrated "catalog" of sales aids available to dealers from fertilizer suppliers . . . descriptions of materials geared to help dealers promote fall application of fertilizers . . . sources of newspaper ad mats, store banners, window decals, mailing pieces, counter displays and allied point-of-sale material.

Question-and-Answer Feature: dealer-readers of the July 23 CROPLIFE will find accurate replies to questions and/or objections of farmers on fall fertilization in a comprehensive "question-and-answer" page.

How One Dealer's Idea Clicked: one of the highlights of CROPLIFE's "Fall Fertilization" issue will be an attention-compelling article—a true "success story"—of the unique ways a Midwest dealer promoted sale and application of fertilizer during fall months.

PLAN YOUR ADVERTISING NOW!

Plan your advertising now for CROPLIFE's special "FALL FERTILIZATION" issue! An unusual opportunity to tie-in with great news and feature coverage of a timely and important subject. Contact your nearest CROPLIFE office for complete details and any service our sales representatives can offer.

DATE OF ISSUE: **July 23, 1956**

ADVERTISING DEADLINE: **July 9 (Monday)**

Croplife

NEW YORK
551 Fifth Ave.
MUrray Hill 2-2185

CHICAGO
2272 Board of Trade Bldg.
HArrison 7-6782

MINNEAPOLIS
2501 Wayzata Blvd.
FEderal 2-0575

KANSAS CITY
612 Board of Trade Bldg.
Victor 2-1350

BPA Member of Business Publications Audit

NBP Member of National Business Publications

Industry Patents and Trademarks

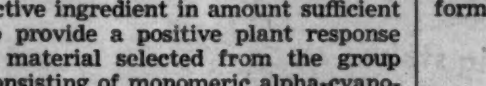
2,749,228. Defoliation. Patent issued June 5, to Waldo B. Ligett, Pontiac, and Calvin N. Wolf, Ferndale, Mich., assignors to Ethyl Corp., New York. A composition effective in defoliating agricultural crops consisting of at least 0.1 part by weight of an N-arylthioamide and up to 100 parts of a hydrocarbon oil and a surface active agent, suitable for use in water and oil emulsion, the concentration of N-arylthioamide being sufficient to cause defoliation.

2,749,229. Plant Growth Regulation With Chlorophenyl Cyanoacrylic Acids and Derivatives. Patent issued June 5, 1956, to Waldo B. Ligett, Pontiac, and Calvin N. Wolf, Detroit, Mich., assignors to Ethyl Corp., New York. A method for regulating the growth processes of plants which comprises applying thereto a plant response composition containing as active ingredient in amount sufficient to provide a positive plant response a material selected from the group consisting of monomeric alpha-cyano-beta-(m-chlorophenyl)acrylic acid, monomeric alpha-cyano-beta-(p-chlorophenyl)acrylic acid, and carboxylic derivatives thereof, and a substantially inert carrier as a dispersant therefor.

2,749,230. Plant Growth Stimulants Containing Water-Insoluble Salts of Penicillin. Patent issued June 5, 1956, to Murray A. Kaplan, Syracuse, N.Y., assignor to Bristol Laboratories, Inc., Syracuse. A composition to stimulate the growth of plants comprising a water-insoluble salt of penicillin G and utilizable nitrogen, phosphorus and essential minerals.

2,749,233. Water-Soluble, Nitrogen-Phosphorus-Containing Product and Process of Making Same. Patent issued June 5, 1956, to John E. Malowan, Dayton, Ohio, assignor to Monsanto Chemical Co., St. Louis, Mo. The process for preparing a water-soluble nitrogen-phosphorus-containing product from the water-insoluble high molecular weight reaction product of phosphorus oxychloride and anhydrous ammonia obtained at a temperature in the range of from 155° C. to 250° C., which comprises hydrolyzing the said reaction product by contacting the same with from 10% to 35% by weight of water at a temperature in the range of from 80° C. to 150° C. in a closed vessel.

2,749,268. Fungicidal Compositions and Their Use. Patent issued June 5, 1956, to Jack S. Newcomer, Grand Island, N.Y., assignor to Pennsylvania Salt Mfg. Co., Philadelphia. A composition prepared for use in combating fungi comprising a surface active agent, and a compound having the formula



wherein each of Ar_1 and Ar_2 represents an aryl radical selected from the group consisting of phenyl, biphenylyl, terphenylyl and naphthyl radicals, said aryl radicals having from 0 to 3 substituents selected from the group consisting of halogen and alkyl radicals having from 1 to 5 carbon atoms; and wherein R represents an alkyl radical selected from the group consisting of primary and secondary alkyl radicals, having from 1 to 5 carbon atoms, said composition forming an emulsion with water upon agitation therewith.

2,749,373. Isomerization of Hexachlorocyclohexane. Patent issued June 5, 1956, to Robert H. Meyer, Concord, Calif., assignor to Dow Chemical Co., Midland, Mich. The method which comprises heating benzene hexachloride with from 1 to 10% of its weight of anhydrous aluminum chloride at a temperature in the range from 130° to 200° C. in a sealed vessel for a period of time which does not exceed one hour, thereby to alter materially the isomer ratio in the benzene hexachloride without substantial conversion of benzene hexachloride to trichlorobenzenes.

2,750,324. Method of Killing Arthropod Pests and Composition Therefor. Patent issued June 12, 1956, to Harry Bender, Torrance, Cal., assignor to Stauffer Chemical Co. The method of killing arthropod pests comprising applying to a pest habitat a mixture containing a compound selected from group 1 and a compound from group 2 wherein group 1 consists of 4-chlorophenyl phenyl sulfone, 4-bromophenyl sulfone and mixtures thereof, and group 2 consists of diphenyl sulfone, bis(4-chlorophenyl) sulfone and mixtures thereof.

Trademarks

The following trademarks were published in the Official Gazette of the U.S. Patent Office in compliance with Section 12 (a) of the Trademark Act of 1946. Notice of opposition under Section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

The trade marks described here appeared in the Official Gazette dated June 5, 1956.

MONOBOR-CHLORATE, in bold-faced letters, for weed and grass killer. Filed Aug. 15, 1955, by Borax Consolidated, Ltd., d.b.a. Pacific Coast Borax Co., Division of Borax Consolidated, Ltd., Los Angeles, Cal. First use, May, 1954.

GOLD SEAL, in capital letters, for fertilizers. Filed March 15, 1955, by International Minerals & Chemical Corp., Chicago, Ill. First use Jan. 18, 1949.

VILLAGE GREEN, in caps and lower case script, for fertilizer made specifically for lawns, gardens, shrubs and trees. Filed May 16, 1955, by Baugh & Sons Co., Philadelphia. First use April 28, 1955.

U-A-S, in capital letters, for fertilizer solution suitable for direct application and for ammoniating fertilizers. Filed Aug. 31, 1955, by Allied Chemical & Dye Corp., New York. First use, July 10, 1955.

The Trade Marks described below were published in the Official Gazette of June 12, 1956:

KAMPKA, in bold caps and lower case, for fertilizers. Filed July 11, 1955, by Chemische Fabrik Kalk G. m.b.H., Koln-Kalk, Germany.

GOLDEN EARTH, in outlined capital letters, for soil conditioner and plant food. Filed Aug. 26, 1955, by Golden Earth, Inc., Encampment, Wyo. First use on or about Mar. 20, 1954.

URADIAN, in capital letters, for nitrogen-containing solution, suitable for use as fertilizer, and for ammoniating fertilizers. Filed Sept. 27, 1955, by Allied Chemical & Dye Corp., New York. First use July 29, 1955.

WEDO, with 2,4-D, in white letters on dark oval, for plant food and fertilizer. Filed Nov. 25, 1955, by The Smith Agricultural Chemical Co., Columbus, Ohio. First use, January, 1930.

VITA LAWN, in hand-lettered capitals, with drawing of house and lawn, for fertilizer. Filed Nov. 28, 1955, by Vita Lawn, Inc., Paterson, N.J. First use, February, 1955.

Raymond Rosson, Author Of Field Notes, Injured

The column, "Field Notes from the County Agent," which usually appears in the Better Selling section of Croplife, is missing this issue. Raymond Rosson, author of the column, was injured recently in an automobile mishap, and was taken to the Johnson City, Tenn., hospital with four broken ribs and cuts and bruises. Mr. Rosson is county agent for Washington County, Tennessee, and resides in Jonesboro, Tenn.

Charles W. Goering

Charles W. Goering Named Representative For National Potash

NEW YORK—Charles W. Goering has joined National Potash Co. as sales representative for the northeastern states, William B. Porterfield, Jr., vice president and sales manager, has announced.

Mr. Goering graduated from Wabash College in 1951 and from the Harvard Business School in 1953. He served for three years in the navy, rising to lieutenant in the supply corps. He will work out of the company's New York offices at 205 E. 42nd St.

National Potash, which is jointly owned by Freeport Sulphur Co. and Pittsburgh Consolidated Coal Co., is constructing facilities to produce potash from deposits near Carlsbad, N.M. Production is scheduled to begin early in 1957.

Du Pont Announces New Thiram Product

WILMINGTON — An improved thiram product for dry (dust) treatment of seed has been announced by the Du Pont Co. It is "Arasan" 75, a thiram seed disinfectant and protectant, containing 75% thiram, in comparison to 50% thiram in "Arasan," which it replaces.

The increased thiram content makes it possible to provide greater protection for certain seeds with less total dust applied, Du Pont said. In addition to the increased concentration, the new product is a wettable powder which facilitates its use in slurry or sprays for certain specialized applications, according to the company.

NEW TRADEMARK—A new trademark for its combined line of Hudson-Hammond multiwall shipping sacks has been announced in New York by the Hudson Pulp & Paper Corp. As shown above, the Hudson name dominates the circular design in which the company's nationally advertised ship and Hammond's "Betterbags" label are included. Hudson multiwall plant locations are listed at the bottom, following the arc of the circle. Hudson's acquisition of Hammond Bag & Paper Co. last summer has more than doubled the parent firm's production of multiwall shipping sacks, company officials state.

PRIVATE LABELS *is the answer!*

If you're "dog tired" of losing repeat orders to competition. If you figure you must take a beating and like it. If you're "fed-up" with competition "hounding" you into exhaustion . . . then it's time to investigate private labeling.

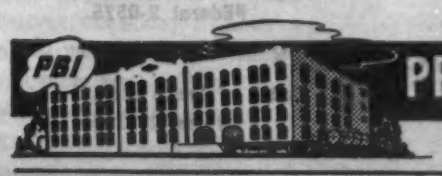
You can "perk-up" and open your eyes to a brighter future. No longer is it necessary to try to sell the same lines as your competition.

You *can capitalize on* your established name in *your* own market.

Through private labeling *you* are assured an exclusive on *your* high quality line in *your* market . . . *Your* customers can't reorder from anyone but YOU.

PRIVATE BRANDS, Inc. is ready with a complete service to help you increase your business. It will pay you to investigate today!

Write, wire, phone for particulars.



PRIVATE BRANDS, INC.

300 South 3rd St. Dept. CL-7
Kansas City, Kansas

...tempt Made to Halt ...ect Damage to Trees

ATLANTA, GA.—A spraying pro...m designed to halt or reduce the ...mage to the southern pine forests ...e been launched to prevent a re...rrence of last year's black turpen...e beetle.

Dr. C. R. Jordan, University of ...orgia College of Agriculture en...mologist, has directed farmers to ...e pesticidal sprays to protect the ...es. He said the trees can be pro...cted up to six months by applying ...sticides to the lower six feet of ...e trunk. He urged, however, that ...rest owners inspect the forests and ...ke preparations to remove any ...es that are dying from beetle dam...e.

The entomologists also warned ...ee owners that the damage regis...ered last fall may be even more ...roublesome this year if something ...s not done to check it. A careful ...atch must be maintained as tem...eratures rise, he said.

The entomologist said the turpen...e beetle could be recognized by ...tch tubes which show up at the ...trance holes in the bark. When ...tacks are severe, the foliage turns ...yellowish-green and finally reddish-...own as the tree dies.

Trees weakened by forest fires ...ast fall and the long winter drouth ...re susceptible to beetle damage, ...Dr. Jordan explained. Good forestry ...ractices in logging and turpentin...ng operations will help in the con...rol, he said.

While an attack is alarming to the ...rest owners, Dr. Jordan said pines ...nder attack by the black turpentine ...eetle often can be saved if proper ...ontrol measures are started in time.

...xecutive Stresses ...alue of Farm Program

MEMPHIS — Owen Cooper, execu...ve vice president of the Mississippi ...hemical Corp., stressed the impor...ance of retaining a national farm ...rogram "as a matter of survival" in ... talk to the Memphis Agricultural ...lub recently.

The Mississippi businessman told ...embers "a collapse of agriculture ...ould imperil our food supply, which ... essential to the national welfare."

However, Mr. Cooper said, some ...old thinking is needed in connection ...ith the agricultural program.

"New ideas should be exploited and ...ried, and some old ideas should be ...ut to work," he said.

Mr. Cooper proposed that an in...ensive promotional campaign be in...ugurated to increase national con...umption of agricultural products. He ...aid if per capita meat consumption ...as increased by 50 lb. per year, it ...ould result in the reduction of sur...lus corn, feed and wheat supplies by ... billion bushels each year.

Mr. Cooper also advocated passage ...f a law to require persons purchas...ng agricultural products being moved ...n interstate commerce to pay a set ...inimum for the product, "perhaps ...5% of parity."

Mr. Cooper advised farmers to put ...25 percent of their earnings or in...estment in something other than ...and, such as good common stock or ...armer-owned businesses."

HYBRID SORGHUMS

CORPUS CHRISTI, TEXAS—A ...eries of meetings in South Texas has ...evealed the growing importance of ...ybrid grain sorghums in the South...est. Tom Roberts, Jr., a representa...ive of the DeKalb Seed Co., which ... now growing hybrid planting seed, ...aid there will be enough seed avail...ble in 1957 for one-third the grain ...orghum acreage of the nation. Field ...rips to test plots have shown that ...ields will be heavy, often produc...ng from 30 to 50% more than the ...ore common varieties.

Dow Chemical Chooses Site for Administration Center

MIDLAND, MICH.—Plans to build a new administrative center in Midland, Mich., have been announced by the Dow Chemical Co.

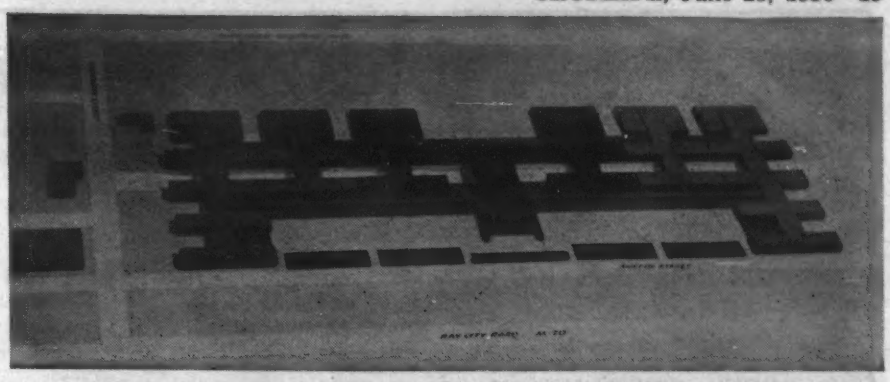
The center in its final form will be a group of buildings in an area almost a half mile long and a quarter mile wide containing headquarters for the entire company.

Ground is to be broken for the first units of the center this summer, according to Leland I. Doan, Dow president.

A site of approximately 80 acres has been selected for the center at the northwest intersection of US-10 (Saginaw Road) and M-20 (Bay City Road), Dr. Doan said. The area is bounded on the north by the Michigan Central Railroad and on the west by Washington St.

A master plan for the center was approved by the company's executive committee earlier. The plan calls for construction of the first three units of the center as soon as plans have been finalized and bids taken.

The unit to be built first is the chemical sales and technical service building, which is expected to be completed late in 1957. This unit will be substantially larger than the present company administration building, according to the company.



DOW CENTER—In its ultimate form, Dow Chemical Co.'s new administrative center at Midland, Mich. will look like this. The small square at the left is the biochemical research building, which measures 208 by 190 ft. The three darker-shaded units in the middle of the center will be built first. Left to right, they are the chemical sales and technical service building, the executive office building and the plastics building.

A new source for nitrogen chemicals

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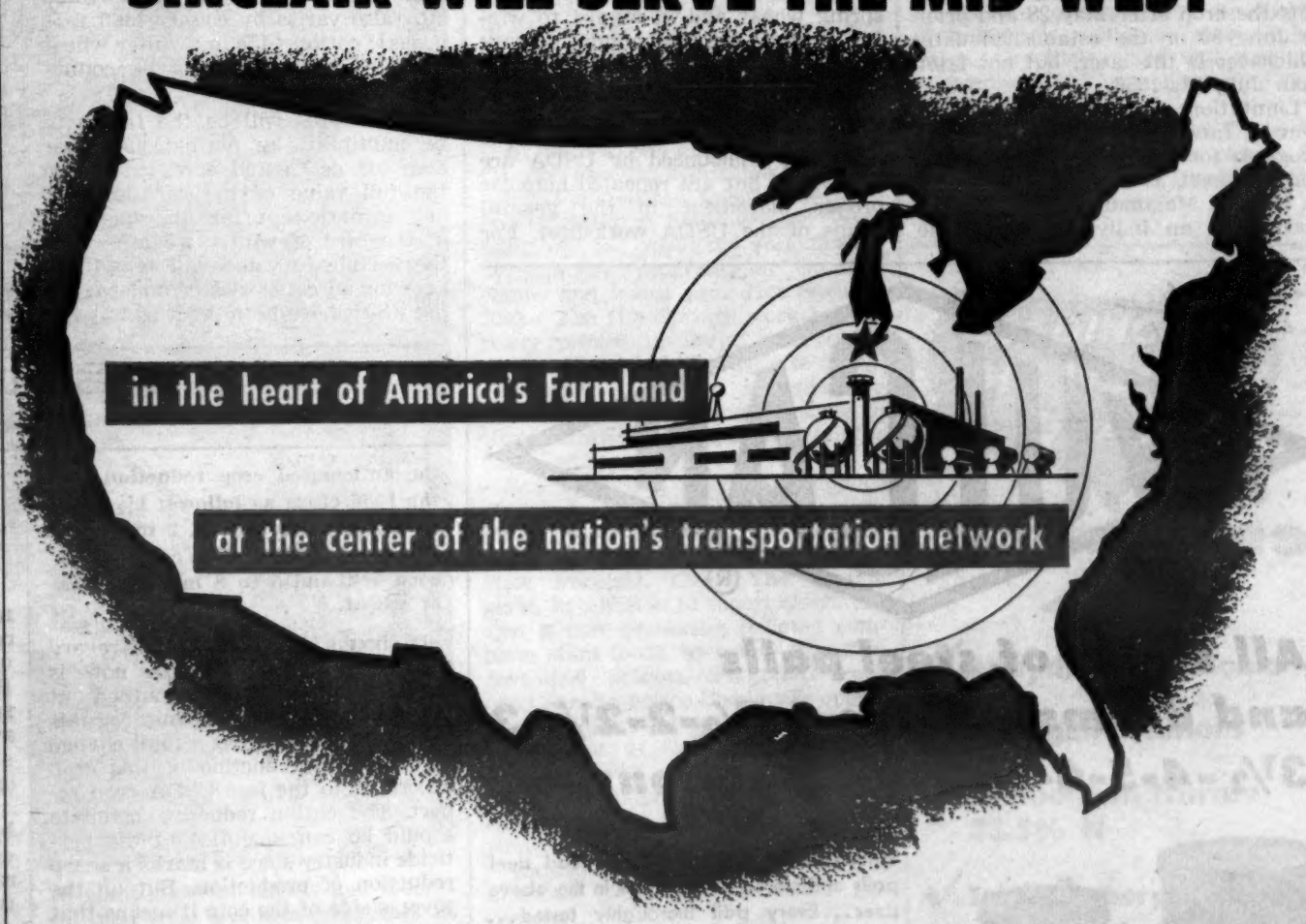

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ACREAGE RESERVE PROGRAM

GENERAL designated acreage must result in harvested acreage less than allotment (or corn base) and not be grazed, cut for hay or cropped in 1956. Noxious weeds must be controlled. All allotments and the corn base must be complied with for the farm final date* for signing agreement is July 20, 1956. Additional requirements follow:

	CORN	RICE	WHEAT, SPRING	COTTON	PEANUTS	WHEAT, WINTER	TOBACCO
UNDERPLANTING ELIGIBILITY	certifies that underplanted corn base or acreage allotment use (1) in anticipation of complying with 1956 soil bank, or (2) due to adverse weather conditions. winter wheat certifies due to adverse weather conditions						
ELIGIBILITY REQUIREMENTS IF FARMER PLANTS	(1) is in compliance but an acreage was not harvested due to destruction by natural causes, or (2) where final date* is after May 28 and farmer incorporates into soil, clips, mows or cuts the crop after May 28 and prior to June 30 or the established date, whichever is later, but in no event later than July 31, 1956.						
ACREAGE MAXIMUM*** LARGER OF	½ of allotment or corn base acreage or 50 acres			½ of allotment or ten acres		½ of allotment or 50 acres	
ACREAGE MINIMUM*** LARGER OF	Allotment of corn—10% of base acreage or 5 acres			10% of allotment or 2 ac's		10% of allotment or 5 ac's	
RATE	90c**	2.25 cwt.	1.20 bu.**	15c lb.	3c lb.	1.20**	
PAYMENT FOR UNDERPLANTING	normal yield of designated acreage times county rate					$4 per acre	
PAYMENT FOR LOSS DUE TO NATURAL CAUSES, PLOWING UNDER, CLIPPING, MOWING OR CUTTING.	smaller of appraised yield of the field or normal yield on the farm times county rate but not less than $6 per acre. The basis for appraisal of loss due to natural causes: Condition of crop after loss. The basis for appraisal for plowing under, etc.: Condition of crop prior to plowing under.						

*Final date is last date established for adjusting crop acreage for acreage reserve program under terms of loan program.
**National average—will vary by counties depending on loan rate.
***Except where the allotment is less than the specified maximum or minimum, the total allotment shall be considered as the minimum or maximum.

SOIL BANK GUIDE

(Continued from page 1)

The final date is that in which the farmer plows under, mows or cuts the crop after May 28 and prior to June 30 or the established date, whichever is the later, but not later than July 31, 1956.

Limitations on acreage participation by farms in the 1956 soil bank program for the crops of corn, rice, spring wheat and winter wheat are as follows: Maximum acreage participation by an individual farm—the larger of ½ of the allotment of corn acreage base or 50 acres. Minimum acreage for small farms is to be the larger of 10% of the corn base acreage allotment under the provisions of the soil bank or five acres.

The same measurement applies to spring wheat and in regard to winter wheat the minimum acreage eligible for the soil bank for the 1956 crop will be the larger of 10% of the acreage allotment or five acres.

The values of soil bank certificates previously announced by USDA are unchanged but are repeated here for proper placement in the general terms of the USDA worksheet. For 1956 crops—corn—90¢ bu. on a national average basis, varying by counties as the loan rate varies. These figures are representative of 60% of the loan rates in effect and will vary by counties for all crops. Rice—$2.25 cwt.; spring wheat—$1.20 bu. (also varies by county loan rate levels); cotton—15¢ lb.; winter wheat—$1.20 bu., also varying by county rates.

Those rates will be the factor to be multiplied by normal yield per acre for designated acres to obtain the full value of the certificate of any farm except for underplanting in the case of winter wheat, where the certificate value will be $4 per acre for all categories of underplanting which have been described above.

Soil bank payments for loss due to natural causes, plowing under, clipping, cutting or mowing will amount, in case of certificates, to the smaller of appraised yield of the field, or the normal yield of the crop of the farm times county rate, but not less than $6 per acre. As in the case of payments for underplanting USDA is fixing a maximum payment for such conditions so that it does not supplant crop insurance or permit farmers to cash in at the last minute on a windfall.

The basis of USDA appraisal for plowing under and other destruction of crops for soil bank certificate purposes will be the condition of the crop prior to plowing under.

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SALES OUTLOOK

(Continued from page 1)

the anticipated crop reduction for the 1956 crops as follows: 1½ to 3 million acres of cotton, 2 to 4 million acres of corn in the commercial corn belt and 5 to 8 million acres of wheat.

It should be noted that in regard to wheat reduction USDA now is paying on blown out or drouthed out wheat land in the soil bank, for this cannot be construed as a total change in indicated production of this crop according to the last USDA crop report. The cotton reduction estimate should be consequential to the pesticide industry since it marks a sharp reduction of production. But on the reverse side of the coin it means that as acreage is cut out it would be more profitable for the land still in production to make maximum crops.

The USDA goals for acreage reduction in the soil bank this year in its acreage reserve program are based on expected compliance or participation in the program.

For the commercial corn belt, Illinois corn farmers tell Croplife that on good corn farms the 90¢ bu. payment in the soil bank is a generous allowance. But on the other hand they say that in this year's program removal of oats or other crops from the corn base acreage at the 90¢ bu. corn soil bank certificate payment base will provide extra money for many corn farmer to take a step into late season corn plant food applications to increase their yields per acre.

After evaluating the cross-current here between industry and USDA it must be seen that the optimists in the plant food industry seem to get the call and that the commercial corn belt may be a bigger late season market than has been anticipated.

Another disconnected point which must be pointed out here is that, as reported in a more detailed analysis of the USDA plans for the soil bank, the basic per unit payment for the soil bank commodities is a national average basis and that in some instances the per unit payment will be larger than the basis figure.

For example, the corn payment base of 90¢ bu., as with wheat and cotton, represents 60% of the loan rate for the commodity in the county where grown. This means that in many counties the 90¢ is a minimum figure.

All persons in the sale and distribution of fertilizer material should gauge their sales approach to farmers on the basis of the county loan rates for the crop they have at hand.

Super Output

WASHINGTON—U.S. April production of superphosphate and other phosphatic fertilizers amounted to 244,644 short tons (100% A.P.A.), a decrease of 1% from the March, 1956 output. Shipments of superphosphate and other phosphatic fertilizers during the month totaled 208,638 tons or a decrease of 3% from the previous month's volume. Stocks on hand at the end of April were 18% less than those held on March 31.

CORN BORER SURVIVAL

FARGO—Winter survival of corn borers in eastern North Dakota has been estimated at 21%.

C. Aubrey Clayton | Russell S. Wilson | G. F. Flenniken | W. Leonard Baer | James N. Stone | Thomas P. Rutledge

Virginia-Carolina Names Supervisory Personnel For Midwest Plants

RICHMOND, VA.—Virginia-Carolina Chemical Corp. has announced the appointment of supervisory personnel for its three new midwestern fertilizer plants and sales offices.

C. Aubrey Clayton was named manager of the sales office and Russell S. Wilson superintendent of the factory at Estherville, Iowa.

G. F. ("Abe") Flenniken is the new manager and W. Leonard Baer superintendent at Remington, Ind.

James N. Stone will take over as manager and Thomas P. Rutledge as superintendent at the firm's new Orrville, Ohio, installation.

All six of the new managers and superintendents are moving up from within the V-C organization. The promotions are effective July 1.

Mr. Clayton, a graduate of Alabama Polytechnic Institute and an army Major during World War II, joined V-C at Memphis in 1952. He was transferred to Dubuque in 1955 as assistant manager of the V-C sales office there.

Mr. Wilson, a native of Collinsville, Ill., is a Navy veteran. He joined V-C in 1934 as a watchman at the East St. Louis plant and was promoted successively to foreman and to assistant superintendent.

The new Remington manager, Mr. Flenniken, joined the company in 1947 as assistant cashier at its East St. Louis sales office. He leaves East St. Louis as assistant manager.

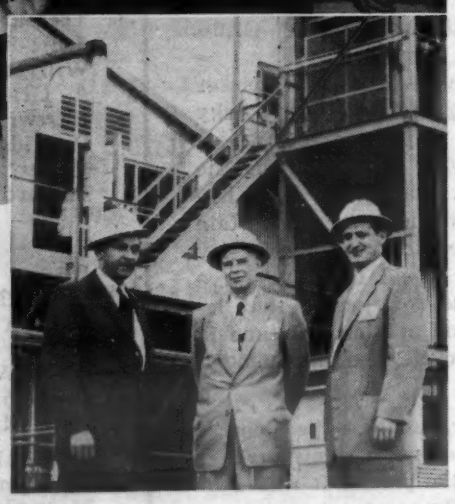
Mr. Baer moves to Remington from Fort Wayne, Ind., where he is chief clerk in V-C's fertilizer factory. A native of Middlebury, Ind., Baer has been a V-C employee since 1946.

Mr. Stone, the manager of V-C's new Orrville sales office, is a graduate of Ohio State. He joined V-C in 1949 as a sales trainee and was made assistant to manager at Fort Wayne in 1954. Stone served with the Navy for three years.

Orrville's superintendent, Mr. Rutledge, has been employed by V-C for 19 years. He began as assistant clerk in the Cincinnati factory and leaves Cincinnati as assistant superintendent. Rutledge served with the Army during World War II.

The Estherville and Remington plants are equipped for producing granular as well as nongranular goods. Orrville's plant will produce a complete line of nongranular fertilizers.

The three new facilities bring to 37 the number of plants and to 24 the number of sales offices in the V-C fertilizer network.



ESCAMBIA BAY MEETING—Phyllis C. Rein of the Escambia Bay Chemical Corp. plant at Pensacola, Fla. is shown above registering guests for the Escambia Bay forum on "Trends in Processing of Mixed Fertilizers." From left to right are H. H. McDonald, Pelham (Ga.) Phosphate Co.; Lewis Marks, Atlas Powder Co., Wilmington, and George Lanier, Swift & Co., Winter Haven, Fla. At the right, during a tour of the Escambia Bay plant, are Mercer Rowe, Jr., vice president of Ashcraft-Wilkinson Co., Atlanta, exclusive distributor of Escambia Bay fertilizer products; John O. Hardesty, U.S. Department of Agriculture, the main forum speaker, and D. J. Stark, vice president and plant manager for Escambia Bay.

Mixed Fertilizer Trends Discussed At Florida Meeting

PENSACOLA, FLA.—John O. Hardesty, U.S. Department of Agriculture, Beltsville, Md., discussed "Trends in Processing of Mixed Fertilizers" at a technical meeting held recently at the Escambia Bay Chemical Corporation plant at Pensacola, Fla. The meeting was sponsored jointly by the Escambia Bay Chemical Corp. and Ashcraft-Wilkinson Co., Atlanta, exclusive distributor for Escambia Bay fertilizer products.

Mr. Hardesty addressed more than 70 plant superintendents and technical men from fertilizer companies in the Southeast. After the talk, the group was conducted on a tour of the plant accompanied by Escambia technicians. The guests were entertained at a dinner party and luncheon during their visit.

A panel discussion on fertilizers was held, Those participating being Mr. Hardesty; Dr. William L. Pritchett, soil chemist, University of Florida; C. T. Nixon (moderator), Ashcraft-Wilkinson Co., and J. H. Paul, Escambia Bay Chemical Corp.

The group was welcomed to the meeting by D. J. Stark, vice president and plant manager of Escambia Bay Chemical Corporation, who introduced Mr. Hardesty.

Mr. Hardesty has a master's degree in chemistry from Michigan State University, where he taught for six years before going to the U.S. Department of Agriculture in 1930. Since then he has been engaged in chemical research in the field of fertilizers.

Stauffer Purchases Half Interest in Mining Concern

NEW YORK—Stauffer Chemical Co. has announced it has purchased a 50% interest in the San Francisco Chemical Co. from its parent, the Mountain Copper Co., Ltd. of London, England. San Francisco Chemical, one of the pioneer mining concerns in the Rocky Mountain area, is a major western producer of phosphate rock. During the past several years it has been Stauffer's primary supplier of phosphate rock.

At present, San Francisco Chemical Co. operates its own mine at Montpelier, Idaho. It also mines a Stauffer-owned claim in Southwestern Wyoming and has conducted an extensive development program on Stauffer claims and leases near Hot Springs, Idaho. The Hot Springs work has already proved up large reserves of commercial grade phosphate rock, and other promising deposits are leased by San Francisco Chemical in Utah's Crawford Mountains, Stauffer Chemical reports.

San Francisco currently supplies phosphate rock to Stauffer's phosphate fertilizer plants at Tacoma, Wash.; Richmond, Calif., and Vernon (Los Angeles), Calif. The Vernon plant, in addition to superphosphates, also is now producing pelleted complete plant foods, by a new Stauffer-developed process. Phosphate rock from San Francisco Chemical's operations is also sold to Western Phosphates Inc. at Garfield, Utah. This company, 50% owned by Stauffer, manufactures phosphoric acid, treble superphosphate and ammonium phosphate.

Management of San Francisco Chemical Company will remain unchanged.

Third Mexican Fruit Fly Found In California Area

SAN FRANCISCO—A third Mexican fruit fly has been discovered near San Ysidro, Cal., only a short distance from where the second was found two weeks earlier.

An adult female was taken from a natal plum tree on June 6, only a quarter of a mile from where the second was discovered on May 25. The first fly was found Aug. 9, 1954.

Three more flies were found south of the border near Tiajuana, one of these only a few hundred feet on the Mexican side.

Officials of state and federal services have been cooperating in a control program plan to increase spraying to forestall migration of the fly to the rich citrus areas north of the border.

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Croplife®

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Midwestern states.

Advertising Magazine Lauds Fertilizer Industry Program

Market expansion in the fertilizer field through encouragement of bank loans to farmers was heralded in the June 15 issue of "Printers' Ink" magazine. A feature story described in detail the program of Spencer Chemical Co. to convince bankers that loans for fertilizer materials will pay off.

The fertilizer industry is of course acquainted with the efforts of the National Plant Food Institute to "sell" banking groups on the wisdom of loaning money to farmers for their purchase of plant food, but the Printers' Ink article points out the Spencer program as an example of institutional selling wherein the banker lends his prestige on local levels, to encourage the purchase of more fertilizer materials.

Here are some excerpts from the article, describing the way in which Spencer moved ahead in this project. Printers' Ink prefaces the article by explaining that the need for credit financing is one of the basic problems faced by farmers in their purchase of fertilizers. Often this credit is needed over an extended period of five years or more, and most country banks have not been in the habit of making this type of loan.

"In the spring of 1950, Spencer Chemical, through its advertising agency, Bruce B. Brewer & Co., began using page advertisements in 'Bank News' to present the idea that it is good business to recommend good farming practices to rural customers," the P.I. article says. "The financial gain to farmers using commercial fertilizer provided the background for all ads.

"Each ad featured an outstanding farm banker who told why and how he promoted fertilizer loans in his area. Thus Spencer was preaching good farming through the words of the best country bankers it could find," the article reported.

In order to broaden its scope of activity, Spencer then began advertising in other banking papers, and by 1953, M. H. Straight, Spencer advertising director, evolved the idea for the "Distinguished Farm Banker" contest, which allowed bankers themselves to select fellow-bankers for subjects for the advertising copy. Working from this point, the company has shown that a program that solves the problems faced by customers also provides a solution to a large portion of the seller's problems, as well.

We are glad to see fertilizer selling programs of this type getting national publicity and certainly the entire industry has nothing to lose in letting the world know that this trade is very much alive.

The idea of making bankers into fertilizer salesmen has always seemed like a most logical step, and the industry's pursuance of this angle through cooperation with state banking groups in many parts of the U.S. is gratifying. We feel that further development of this principle of banker-selling will lead directly to greater volume of fertilizer distribution. The banker is usually a man of influence in a community, and if he shows a willingness to provide the cash for fertilizer purchases, a big step has been taken in the sales process.

Some regard this method as a self-perpetuating one. Farmer Schmaltz, upon applying optimum amounts of fertilizer for the first time, finds that it does indeed pay off in lower unit costs. Next year, both he and the banker will be happy to work together in the purchase of perhaps a larger supply of plant food. And so it goes.

Congratulations to Spencer and other fertilizer producers who are following sales policies that will have a beneficial long-range effect on the prosperity of the entire industry!

BIOGRAPH—

Minnesota Entomologist Retires After Long Service

A Ukrainian-born University of Minnesota entomologist who has many national "firsts" in the field of insect control improvements will retire June 30. He is Prof. Alexander A. Granovsky, a member of Minnesota's staff since 1930, who was born in Berezcy, the Ukraine, and came to the U.S. in 1913 at 25 with no knowledge of English but with a determination to get an education in a free land.

He worked for 18 months at odd jobs in Chicago, learned English, then started as a freshman at Colorado A&M College, Fort Collins. He was graduated in 1918 with majors in agronomy and entomology.

He began his entomology research career in 1922, at the University of Wisconsin. One of his first projects was in the Dorr County peninsula, testing grasshopper baits and seeking controls for fruit insects that plagued that famous cherry-growing area. Under his leadership, some of the nation's first aerial spraying for insect control was carried on.

He earned his Master's and Doctor of Philosophy degrees at Wisconsin and joined the University of Minnesota in 1930 to tackle control of white grubs which often killed out entire pastures in southern Minnesota. In the north, it was sometimes necessary to make seven or eight forest plantings before one would finally "take." Grubs ate the seedlings.

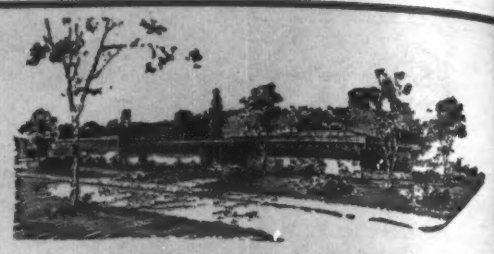
For a year or two, every Thursday, winter and summer, was grub-digging day for Granovsky and his graduate students. Object: to get an idea of grubs' life cycle and living habits. Among the key findings was the fact that grubs don't live under ground planted with legumes or certain clovers. Granovsky reasoned that the answer lay in a crop rotation which would literally starve them out. By planning the rotation so that legumes would be on the land at a crucial time in the grubs' three-year life cycle, the entomologist licked the grub problem.

Several years later, another problem arose—how to get grubs out of strawberry fields without injuring the plants. It was a difficult problem, but Granovsky tried aldrin, dieldrin and chlordane. They brought the grubs to the surface where they lay paralyzed, unable to burrow back "home."

Another Granovsky first was his control method for cutworms. Thousands of gardeners now treat their land for cutworms with the formula he developed. Each year, thousands of acres of truck gardens are air-sprayed for white grub control.

A third achievement was his work on the potato insects. In 1943 and 1944, at the University's Northwest School and Experiment Station at Crookston, Minn., Dr. Granovsky tried many DDT formulas and found several that would check flea hoppers, Colorado potato beetles and a host of other potato plaguers. His findings have resulted in almost tripling Red River Valley potato yields per acre.

What are his plans as he retires at 68? He will work on research articles and has a full-scale aphid survey down on paper. He will investigate aphids' living habits in Minnesota and the fringes of her neighboring states.



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MEETING MEMOS

ne 26-28, Pacific Branch, Entomological Society of America, Hotel Claremont, Berkeley, Cal.

ne 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., secretary-treasurer.

ne 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

ne 30—Del-Mar-Va Peninsula Fertilizer Assn., 35th Annual Convention, Hotel George Washington, Ocean City, Md., F. N. Strudwick, P.O. Box 199, Salisbury, Md., Secretary.

ly 4-8—Plant Food Producers of Eastern Canada, Annual Meeting, Mont Tremblant Lodge, Mont Tremblant, Quebec.

ly 10-13—Extension Fertilizer Dealer-Manufacturer Congresses. Sponsored by University of Georgia College of Agriculture and Georgia Plant Food Educational Society; Northwest District, Georgia Experiment Station, Griffin, July 10; Northeast District, College Experiment Station, Athens, July 11; Southwest and Southeast Districts, Coastal Plain Experiment Station, Tifton, July 13.

ly 12—South Carolina Fertilizer Meeting, Tour of Edisto Experiment Station, Blackville, S.C.

ly 19-20—Southwestern Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

ly 25-27—Northwest Association of Horticulturists, Entomologists and Plant Pathologists Conference, Northwest Washington Experiment Station, Mount Vernon, Wash.

g. 1—Kentucky Fertilizer Conference, Guignol Theatre, University of Kentucky, Lexington, Ky.

g. 2-3—Nitrogen Field Day and Equipment Demonstration, Ohio State University, Columbus, Ohio.

g. 14-15—Ohio Pesticide Institute, Summer Meeting, Ohio Agricultural Experiment Station, Wooster, Ohio, J. D. Wilson, Wooster, Ohio, Secretary.

g. 17-25—Tenth International Congress of Entomology, McGill University and University of Montreal, Montreal, Canada, J. A. Downes, Science Service Bldg., Carling Ave., Ottawa, Ontario, Canada, Congress Secretary.

g. 22-24—Beltwide Cotton Mechanization Conference, Atlanta Biltmore, Atlanta, Ga., sponsored by National Cotton Council.

g. 28-29—Fertilizer Meeting, Nebraska Agricultural College, Lincoln, Neb. Sponsored by the Agricultural Ammonia Institute.

g. 30—South Carolina Plant Food Educational Society, Clemson House, Clemson, S.C.

pt. 5-7 — National Agricultural Chemicals Assn., 23rd Annual Meeting, Essex and Sussex, Spring Lake, N.J., L. S. Hitchner, 1145 19th St. N.W., Washington, D.C., Executive Secretary.

t. 15 — Fifth Annual Chemical Sales Clinic, Hotel Commodore, New York, Sponsored by the Salesmen's Association of the American Chemical Industry.

t. 15 — Fifth Annual Chemical Sales Clinic, the Salesmen's Association of the American Chemical Industry; Hotel Commodore, New York City; chairman, Preston F. Tinsley, Westvaco Chlor-Alkali Division, Food Machinery and Chemical Corp., 161 East 42nd St., New York 17, N.Y.

t. 16-17—National Nitrogen Solutions Assn., Annual Meeting and Trade Show, City Auditorium, Sioux City, Iowa; John White, Auburn, Neb., secretary.

t. 16-18—Fertilizer Industry Round Table, Shoreham Hotel, Washington, D.C. Vincent Sauchelli, Chief Agronomist, Davison Chemical Co., Div. W. R. Grace Co., Baltimore 3, Md., chairman.

t. 18-19—Association of American Fertilizer Control Officials, Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Clemson Agricultural College, Clemson, S.C., secretary-treasurer.

t. 23-24—Pacific Northwest Garden Supply Trade Show, Shrine Auditorium, Portland, Ore.

v. 2—Joint Agronomy-Industry Work Conference, Atlanta Biltmore Hotel, Atlanta, Ga.

v. 7-9—Agricultural Ammonia Institute, Annual Convention, Atlanta Biltmore Hotel, Atlanta, Ga., Jack F. Criswell, Claridge Hotel, Memphis, executive vice president.

v. 11-13 — California Fertilizer Assn., 33rd annual convention, Del Coronado Hotel, Coronado, Cal.; Sidney H. Bierly, executive secretary, 475 Huntington Drive, San Marino 9, Cal.

v. 19-20 — Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., secretary.

v. 28—Oklahoma Fertilizer Dealers Conference, Sponsored by the Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater.

v. 29—Oklahoma Soils and Crops Conference, Oklahoma A&M College, Stillwater.

c. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

JOHN D. RUE HONORED

TACOMA—John D. Rue, works manager of Hooker Electrochemical Co. in Tacoma before his retirement in 1951, has been given the regional award of the Puget Sound section of the American Chemical Society. The award is for distinguished contributions to the development of chemistry in the Pacific Northwest.

Plastic Greenhouses Completed at Arkansas

FAYETTEVILLE, ARK.—Two new plastic greenhouses have been completed on the University of Arkansas' Main Agricultural Experiment Station at Fayetteville, Dr. John W. White, associate director of the experiment station, reports.

Constructed by the departments of plant pathology and agronomy, the two houses were built at a large saving because of the inexpensiveness of the plastic covering in comparison with materials more commonly used, he said. Both buildings cost less than one-fifth of what an ordinary glass-covered greenhouse of comparable size and design would cost.

Work in the greenhouse constructed by the agronomy department will be concerned principally with use of herbicides on cotton and soybeans. Dr. R. E. Frans, assistant agronomist, will be in charge of this work.

Nitrogen Essential in Trashy Fallow Program, Conservation Winner Says

PORTLAND, ORE.—Nitrogen fertilizer and the deep furrow drill are essentials in a trashy fallow program of conservation farming, some 250 eastern Oregon wheat growers learned from a top conservation farmer at a recent field day on the Loyd Smith and Sons farm near Mayville, in Oregon's Gilliam County.

Mr. Smith and his son, Jack, and son-in-law, Morris Wilson, won the 1955 "Conservation Man of the Year" award in the Oregon Wheat Growers league contest. The three, who run their individual farms as a single family unit, operate some 7,000 acres.

The Smiths have about 2,000 acres in trashy fallow or stubble mulch, and credit nitrogen fertilizer with making possible this system of farming without reducing yields.

They apply the nitrogen, liquid ammonia, from tanks mounted on the tillage implement in the final cultivation just before fall seeding.

The deep furrow drill is the first piece of equipment a farmer needs for a trashy fallow program, according to Jack Smith. Conventional drills can't make a good seeding in the clods and trash, he said. The Smiths use deep-furrow drilling on the contour on some 1,000 acres.

It takes a combination of practices to halt erosion, Mr. Smith said. Besides trashy fallow and deep-furrow drills, they use large diversion ditches, terraces and grass seedings.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $9 per column inch.

All Want Ads cash with order.

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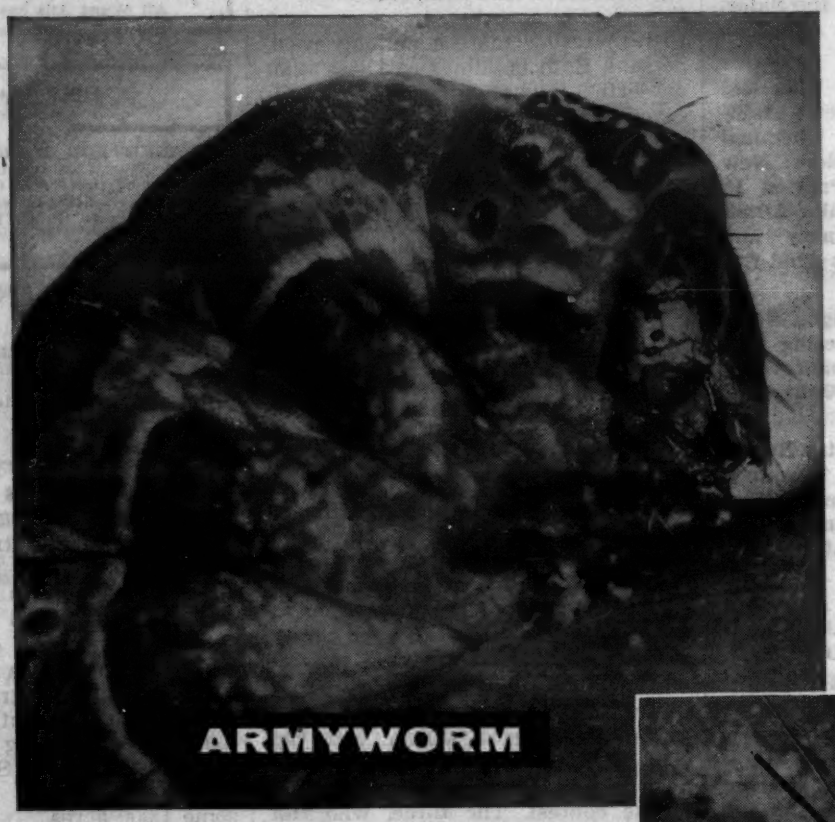

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